

CALIFORNIA INSTITUTE OF TECHNOLOGY JET PROPULSION LABORATORY

GENERAL PROVISIONS: COST-REIMBURSEMENT WITHOUT FEE WITH AN EDUCATIONAL INSTITUTION (COLLEGE OR UNIVERSITY) SUBCONTRACT

GENERAL PROVISION TITLE	PAGE
ADDITIONAL DATA REQUIREMENTS	3
AFFIRMATIVE ACTION FOR WORKERS WITH DISABILITIES	3
ALLOCATION OF RIGHTS IN PROPERTY AND DATA - COST-SHARE SUBCONTRACTS	3
ALLOWABLE COST AND PAYMENT – CREI	3
ANTI-KICKBACK PROCEDURES	6
ASBESTOS NOTIFICATION	7
ASSIGNMENT, NOVATION AND TRANSFER	7
ASSIGNMENT OF RIGHTS AND DELEGATION OF DUTIES	7
AUDITS AND RECORDS – NEGOTIATION	8
AUTHORITY OF JPL REPRESENTATIVES	9
AUTHORIZATION AND CONSENT	9
BANKRUPTCY	9
BUY AMERICAN ACT – SUPPLIES	10
CHANGES – CREI	10
COMPLIANCE WITH THE AMERICANS WITH DISABILITIES ACT	10
COST ACCOUNTING STANDARDS (EDUCATIONAL INSTITUTION), AND ADMINISTRATION OF COST ACCOUNTING STANDARDS	11
CROSS-WAIVERS OF LIABILITY FOR SPACE SHUTTLE SERVICES, NASA EXPENDABLE LAUNCH VEHICLE (ELV) LAUNCHES, AND FOR SPACE STATION ACTIVITIES	11
DATA REMOVAL FROM COMPUTERS	15
DEFENSE PRIORITY AND ALLOCATION REQUIREMENTS	16
DEFINITIONS	16
DESIGNATION OF NEW TECHNOLOGY REPRESENTATIVE AND PATENT REPRESENTATIVE	18
DISPUTES	18
DRUG-FREE WORKPLACE REQUIREMENTS	19
ELECTRICAL EQUIPMENT ACQUISITION	19
EMPLOYMENT REPORTS ON SPECIAL DISABLED VETERANS, VETERANS OF THE VIETNAM ERA, AND OTHER ELIGIBLE VETERANS	20
ENVIRONMENTAL COMPLIANCE	20
EQUAL OPPORTUNITY	20
EQUAL OPPORTUNITY FOR SPECIAL DISABLED VETERANS, VETERANS OF THE VIETNAM ERA, AND OTHER ELIGIBLE VETERANS	20
EXISTING COMMERCIAL COMPUTER SOFTWARE – LICENSING	21
EXPORT LICENSES	22
FACSIMILE COPIES ACCEPTABLE	22
FINAL REPORT	22
FIRST-TIER SUBCONTRACTS	22
FIRST-TIER SUBCONTRACTS FOR COMMERCIAL ITEMS	23
GEOGRAPHIC PARTICIPATION IN THE AEROSPACE PROGRAM	23
GOVERNMENT PROPERTY	23
HAZARDOUS MATERIAL IDENTIFICATION AND MATERIAL SAFETY DATA	27
INJURY AND ILLNESS PREVENTION PROGRAM	29
INSPECTION OF RESEARCH AND DEVELOPMENT	29
INSURANCE - LIABILITY TO THIRD PERSONS	29
INTEGRITY OF UNIT PRICES	30
LIMITATION OF COST	31
LIMITATION OF FUNDS	31
LIMITATION OF LIABILITY	33
LIMITATION ON PAYMENTS TO INFLUENCE CERTAIN FEDERAL TRANSACTIONS	35
LIMITATION ON WITHHOLDING OF PAYMENTS	35
MATERIAL REQUIREMENTS	36
NOTICE AND ASSISTANCE REGARDING PATENT AND COPYRIGHT INFRINGEMENT	36
NOTICE OF RADIOACTIVE MATERIALS	36
NOTIFICATION OF OWNERSHIP CHANGES	37
NOTICE TO JPL OF LABOR DISPUTES	37
ORDER OF PRECEDENCE	38
PATENT RIGHTS - RETENTION BY THE SUBCONTRACTOR (SHORT FORM)	38
PAYMENT FOR OVERTIME PREMIUMS	42

PENSION ADJUSTMENTS AND ASSET REVERSIONS	43
PREDETERMINED OR FIXED INDIRECT COST RATES – CREI	43
PREFERENCE FOR PRIVATELY OWNED U.S.-FLAG COMMERCIAL VESSELS	44
PREFERENCE FOR U.S.-FLAG AIR CARRIERS	45
PRINTING AND DUPLICATING	45
PROHIBITION OF SUBCONTRACTOR USE OF PRIVATELY OWNED AIRCRAFT IN SUBCONTRACT PERFORMANCE	46
PROHIBITION OF SEGREGATED FACILITIES	46
RELEASE OF INFORMATION	46
REQUIRED NOTICES	46
RESTRICTIONS ON CERTAIN FOREIGN PURCHASES	46
RESTRICTIONS ON FIRST-TIER SUBCONTRACTOR SALES	46
REVERSION OR ADJUSTMENT OF PLANS FOR POSTRETIREMENT BENEFITS OTHER THAN PENSIONS (PRB)	46
RIGHTS IN DATA – GENERAL	47
RIGHTS IN TECHNICAL PROPOSAL DATA	52
SAFETY AND HEALTH – CREI	52
SMALL BUSINESS FIRST-TIER SUBCONTRACTING PLAN	55
SMALL BUSINESS FIRST-TIER SUBCONTRACTING REPORTING	55
SUBCONTRACT WORK HOURS AND SAFETY STANDARDS ACT - OVERTIME COMPENSATION	55
SUBCONTRACTOR AND FIRST-TIER SUBCONTRACTOR COST OR PRICING DATA, OR INFORMATION OTHER THAN COST OR PRICING DATA AND PRICE REDUCTION FOR DEFECTIVE COST OR PRICING DATA	56
TECHNICAL DIRECTION – COST TYPE	59
TERMINATION FOR CONVENIENCE – CREI	60
TOXIC CHEMICAL RELEASE REPORTING	61
TRANSFER OF TECHNICAL DATA UNDER SPACE STATION INTERNATIONAL AGREEMENTS	61
USE OF RURAL AREA SMALL BUSINESSES	61
UTILIZATION OF SMALL BUSINESS CONCERNS	62

GENERAL PROVISIONS CANNOT BE ALTERED WITHOUT NASA APPROVAL

The following attachments are incorporated into the General Provisions. Submission of an offer and beginning performance constitute certification and recertification per Form JPL 2892.

- Management of Government Property in the Possession of Subcontractors, Form JPL 0968
- Release of Information, Form JPL 1737
- Notification to Prospective Subcontractors of JPL's Ethics Policies and Anti-Kickback Hotline, Form JPL 2385
- Vesting of Property Purchased with Subcontract Funds, Form JPL 2710
- Certifications, Form JPL 2892
- Asbestos Notification, Form JPL 2895

ADDITIONAL DATA REQUIREMENTS

[CT, FP-NR&D, FP-R&D, CREI – 09/04] [FAR 52.227-16 - 06/87]

- (a) In addition to the data (as defined in the "Rights in Data - General" Article or other equivalent included in this Subcontract) specified elsewhere in this Subcontract to be delivered, JPL may at any time during Subcontract performance or within a period of three years after acceptance of all items to be delivered under this Subcontract, order any data first produced or specifically used in the performance of this Subcontract.
- (b) The "Rights in Data - General" Article or other equivalent included in this Subcontract is applicable to all data ordered under this "Additional Data Requirements" Article. Nothing contained in this Article shall require the Subcontractor to deliver any data the withholding of which is authorized by the "Rights in Data - General" Article or other equivalent Article of this Subcontract, or data which are specifically identified in this Subcontract as not subject to this Article.
- (c) When data are to be delivered under this Article, the Subcontractor will be compensated for converting the data into the prescribed form, for reproduction, and for delivery.
- (d) The Contracting Officer through JPL may release the Subcontractor from the requirements of this Article for specifically identified data items at any time during the three-year period set forth in paragraph (a) above.

AFFIRMATIVE ACTION FOR WORKERS WITH DISABILITIES

[CT, FP-NR&D, FP-R&D, CIS, T&MC, LH/T&M, FPC, CREI, A – E, RSA – 09/04] [FAR 52.222-36 - 06/98]

(This Article applies to Subcontracts over \$2,500, unless the work is performed outside the United States by employees recruited outside the United States.)

Incorporate by reference FAR 52.222-36, Affirmative Action for Workers with Disabilities (29 U.S.C. 793).

ALLOCATION OF RIGHTS IN PROPERTY AND DATA - COST-SHARE SUBCONTRACTS

[CT, CREI – 09/04]

Whether or not this Subcontract provides for any cost sharing, rights in data and property are determined as though all costs of performance were to be reimbursed by the Institute.

ALLOWABLE COST AND PAYMENT – CREI

[CREI – 09/04] [FAR 52.216-7 – 02/02, 52.216-11 04/84]

- (1) Invoicing and Payment.
 - (2) The Subcontractor shall submit an original and three copies of its invoices monthly, unless otherwise provided in the Schedule of the Subcontract, to: Jet Propulsion Laboratory, Attention: Accounting Section, 4800 Oak Grove Drive, Pasadena, California 91109.
 - (3) The Institute shall make payments to the Subcontractor once each month (or at more frequent intervals if approved by JPL) in amounts determined to be allowable by the Institute in accordance with Subpart 31.3 of the FAR in effect on the date of this Subcontract and any corresponding implementing or supplementing provisions in the NFS in effect on the date of this Subcontract and the terms of this Subcontract. The Subcontractor may submit, in such form and reasonable detail as JPL may require, an invoice supported by a statement of the claimed allowable cost for performing this Subcontract.
 - (4) JPL may elect to either send payments to the Subcontractor by mail or require the Subcontractor to accept electronic payments. Payment shall be deemed to have been made on the date the check is mailed or the date of payment by electronic funds transfer.
- (e) Reimbursing Costs.
- (1) For the purpose of reimbursing allowable costs (except as provided in subparagraph (2) below, with respect to pension, deferred profit sharing, and employee stock ownership plan contributions), the term "costs" includes only:
 - (A) Those recorded costs that, at the time of the request for reimbursement, the Subcontractor has paid by cash, check, or other form of actual payment for items or services purchased directly for the Subcontract;

- (B) When the Subcontractor is not delinquent in paying costs of Subcontract performance in the ordinary course of business, costs incurred, but not necessarily paid, for (i) materials issued from the Subcontractor's inventory and placed in the production process for use on the Subcontract; (ii) direct labor; (iii) direct travel; (iv) other direct in-house costs; and (v) properly allocable and allowable indirect costs, as shown in the records maintained by the Subcontractor for purposes of obtaining reimbursement under Government Subcontracts or First-tier Subcontracts; and
 - (C) The amount of progress payments that have been paid to the Subcontractor's sFirst-tier Subcontractors under similar cost standards.
- (2) Subcontractor contributions to any pension or other post-retirement benefit, profit-sharing, or employee stock ownership plan funds that are paid quarterly or more often may be included in indirect costs for payment purposes; provided, that the Subcontractor pays the contribution to the fund within 30 days after the close of the period covered. Payments made 30 days or more after the close of a period shall not be included until the Subcontractor actually makes the payment. Accrued costs for such contributions that are paid less often than quarterly shall be excluded from indirect costs for payment purposes until the Subcontractor actually makes the payment.
 - (3) Notwithstanding the audit and adjustment of invoices under paragraph (h) below, allowable indirect costs under this Subcontract shall be obtained by applying indirect cost rates established in accordance with paragraph (e) below.
 - (4) Any statements in specifications or other documents incorporated in this Subcontract by reference designating performance of services or furnishing of materials at the Subcontractor's expense or at no cost to the Institute shall be disregarded for purposes of cost-reimbursement under this Article.
 - (5) JPL shall not pay the Subcontractor a fee for performing this Subcontract.
- (f) Small Business Concerns. A small business concern may be paid for recorded costs for items or services purchased directly for the Subcontract, even though the concern has not yet paid for those items or services.
 - (g) Payment.

Promptly after receipt of each invoice the Institute shall, subject to the provisions of paragraph (h) below, make payment thereon as approved by JPL.
 - (h) Final Indirect Cost Rates.
 - (1) Final annual indirect cost rates and the appropriate bases shall be established in accordance with Subpart 42.7 of FAR and any corresponding implementing or supplementing provisions in the NFS in effect for the period covered by the indirect cost rate proposal; provided, however, that the advance understandings, if any, on particular items of cost, as set forth in the Schedule of this Subcontract shall be given effect, provided further, however, that in the event of any inconsistency between such advance understandings and the cost principles referred to in (a) above, the cost principles shall prevail.
 - (2) A copy of the agreement between the Subcontractor and the Government for each of the periods applicable to this Subcontract, setting forth the indirect cost rates established in accordance with subparagraph (1) above, shall be furnished by the Subcontractor to JPL within two weeks of the final annual indirect cost rates, and shall be deemed to be automatically incorporated into this Subcontract, subject to the proviso set forth in subparagraph (1) above.
 - (3) Notwithstanding subparagraphs (1) and (2) above, the Subcontractor and JPL may agree on indirect rates to be used as final indirect rates for this Subcontract to expedite the administration and closeout of this Subcontract, provided such rates can be shown to be reasonable under the circumstances.
 - (i) Billing Rates. Unless provisional, predetermined, or fixed indirect cost rates are established for any period, the Institute shall reimburse the Subcontractor at billing rates acceptable to JPL, subject to adjustment when the final rates are established. These billing rates:
 - (a) Shall be the anticipated final rates; and
 - (4) May be prospectively or retroactively revised by mutual agreement, at either party's request, to prevent substantial overpayment or underpayment.

- (b) Quick-Closeout Procedures. The Subcontractor and JPL may agree to use any reasonable procedures under the circumstances to expedite closeout, including the quick-closeout procedures of Subpart 42.7 of the FAR and any corresponding implementing or supplementing provisions in the NFS.
- (c) Audit. At any time or times before final payment, JPL may have the Subcontractor's invoices or statements of cost audited. Any payment may be (i) reduced by amounts found by JPL not to constitute allowable costs or (ii) adjusted for prior overpayments or underpayments.
- (d) Compliance Audit Reports. The Subcontractor shall deliver to JPL any required Compliance Audit Reports pursuant to OMB Circular A-133 within 30 days of completion of the Report or receipt of the Report by the Subcontractor for any periods during which this Subcontract is being performed.
- (e) Final Payment.
 - (1) For Subcontracts in which in accordance with FAR 31.3 predetermined or fixed indirect cost rates are applicable to all periods of the Subcontract, the Subcontractor shall submit a completion invoice, designated as such, promptly upon completion of the work, but no later than 120 days (or longer, as JPL may approve in writing) from the completion date. For all other Subcontracts, the Subcontractor shall submit a completion invoice within 120 days after settlement of the final indirect cost rates for all years of a physically complete Subcontract, and such invoice shall reflect the settled amounts and rates. Upon approval of that invoice, and upon the Subcontractor's compliance with all terms of this Subcontract, the Institute shall promptly pay any balance of allowable costs. NOTE: If the Subcontractor fails to submit a completion invoice within the time specified herein, JPL may determine the amount due to the Subcontractor under the Subcontract, and record this determination in a unilateral modification to the Subcontract.
 - (2) The Subcontractor shall pay to the Institute any refunds, rebates, credits, or other amounts (including interest, if any) accruing to or received by the Subcontractor or any assignee under this Subcontract, to the extent that those amounts are properly allocable to costs for which the Subcontractor has been reimbursed by the Institute. Reasonable expenses incurred by the Subcontractor for securing refunds, rebates, credits, or other amounts shall be allowable costs if approved by JPL. Before final payment under this Subcontract, the Subcontractor and each assignee whose assignment is in effect at the time of final payment shall execute and deliver:
 - (a) An assignment to the Institute, in form and substance satisfactory to JPL, of refunds, rebates, credits, or other amounts (including interest, if any) properly allocable to costs for which the Subcontractor has been reimbursed by the Institute under this Subcontract; and
 - (D) A release discharging the Institute, its officers, agents and employees from all liabilities, obligations, and claims arising out of or under this Subcontract, except:
 - (i) Specified claims stated in exact amounts, or in estimated amounts when the exact amounts are not known;
 - (ii) Claims (including reasonable incidental expenses) based upon liabilities of the Subcontractor to third parties arising out of the performance of this Subcontract; provided, that the claims are not known to the Subcontractor on the date of the execution of the release, and that the Subcontractor gives notice of the claims in writing to JPL within six years following the release date or notice of final payment date, whichever is earlier; and
 - (iii) Claims for reimbursement of costs, including reasonable incidental expenses, incurred by the Subcontractor under the patent provisions of this Subcontract, excluding, however, any expenses arising from the Subcontractor's indemnification of the Institute against patent liability.
 - (iv) When there is included in this Subcontract a provision entitled "Additional Data Requirements," claims pursuant to such provision when a written request by the Institute to furnish data is made.
 - (E) If the Subcontractor fails to return the assignment and release described in (A) and (B) above with the release either executed for the amount determined by JPL or with a different amount within 60 days of JPL's request, JPL may make final payment in the amount determined by JPL and the assignment and release (for the JPL-determined amount) described in (A) and (B) above will be deemed to have been executed and delivered by the Subcontractor.

ANTI-KICKBACK PROCEDURES

[CT, FP-NR&D, FP-R&D, T&MC, LH/T&M, FPC, CREI, A -, RSA – 09/04] [FAR 52.203-7 – 07/95]

(a) Definitions.

- (1) "Kickback," as used in this Article, means any money, fee, commission, credit, gift, gratuity, thing of value, or compensation of any kind which is provided, directly or indirectly, to any prime Contractor, prime Contractor employee, First-tier Subcontractor, or First-tier Subcontractor employee for the purpose of improperly obtaining or rewarding favorable treatment in connection with a prime contract or in connection with a First-tier Subcontract relating to a prime contract.
- (2) "Person," as used in this Article, means a corporation, partnership, business association of any kind, trust, joint-stock company, or individual.
- (3) "Prime contract," as used in this Article, means a Subcontract or contractual action entered into by the United States for the purpose of obtaining supplies, materials, equipment, or services of any kind.
- (4) "Prime Contractor," as used in this Article, means a person who has entered into a prime contract with the United States.
- (5) "Prime Contractor employee," as used in this Article, means any officer, partner, employee, or agent of a prime contractor.
- (6) "First-tier Subcontract," as used in this Article, means a Subcontract or contractual action entered into by a prime Contractor or First-tier Subcontractor for the purpose of obtaining supplies, materials, equipment, or services of any kind under a prime contract.
- (7) "First-tier Subcontractor," as used in this Article, (i) means any person, other than the prime Contractor, who offers to furnish or furnishes any supplies, materials, equipment, or services of any kind under a prime contract or a First-tier Subcontract entered into in connection with such prime contract, and (ii) includes any person who offers to furnish or furnishes general supplies to the prime contractor or a higher-tier First-tier Subcontractor.
- (8) "First-tier Subcontractor employee," as used in this Article, means any officer, partner, employee, or agent of a First-tier Subcontractor.

(b) The Anti-Kickback Act of 1986 (41 U.S.C. 51-58) (the Act), prohibits any person from:

- (a) Providing or attempting to provide or offering to provide any kickback;
 - (b) Soliciting, accepting, or attempting to accept any kickback; or
 - (c) Including, directly or indirectly, the amount of any kickback in the Subcontract price charged by a prime Contractor to the United States or in the Subcontract price charged by a First-tier Subcontractor to a prime contractor or higher-tier subcontractor.
- (d)
- (a) When the Subcontractor has reasonable grounds to believe that a violation described in paragraph (b) of this Article may have occurred, the Subcontractor shall promptly report in writing the possible violation. Such reports shall be made to the inspector general of the contracting agency, the head of the contracting agency if the agency does not have an inspector general, or the Department of Justice.
 - (b) The Subcontractor shall cooperate fully with any Federal agency investigating a possible violation described in paragraph (b) of this Article.
 - (c) The Institute may (i) offset the amount of the kickback against any monies owed under the Subcontract and/or (ii) direct that the Subcontractor withhold, from sums owed a First-tier Subcontractor under the Subcontract, the amount of any kickback. JPL may order that monies withheld under subdivision (c)(3)(ii) of this Article be paid over to JPL unless JPL has already offset those monies under subdivision (c)(3)(i) of this Article. In either case, the Subcontractor shall notify JPL when the monies are withheld.
- (9) The Subcontractor agrees to incorporate the substance of this Article, including this subparagraph (c)(4), in all First-tier Subcontracts under this Contract.

ASBESTOS NOTIFICATION

[CT, FP-NR&D, FP-R&D, T&MC, LH/T&M, FPC, CREI, A - E – 02/00]

(This Article applies if any of the Subcontract effort will be performed in JPL-Pasadena buildings. Work performed outside the United States is exempt from the requirements of this Article.)

Subcontractor acknowledges receipt of the attached "Asbestos Notification," form JPL 2895, identifying JPL buildings containing asbestos and agrees to distribute the Notice to all its personnel prior to their commencing work in such buildings. Subcontractor agrees to coordinate with the JPL Safety Operations Section for special asbestos handling instructions to be given to all Subcontractor's personnel, including First-tier Subcontractors' personnel, prior to their commencing work, if any, which could disturb asbestos in JPL-controlled buildings. The substance of this Article will be included in all First-tier Subcontracts issued under this Article for work performed in JPL-Pasadena buildings.

ASSIGNMENT, NOVATION AND TRANSFER

[CT, FP-NR&D, FP-R&D, T&MC, LH/T&M, FPC, CREI, A - E, CIS, RSA– 09/04] [FAR 52.244-2 – 08/98]

This Subcontract may be assigned, novated, or transferred to a successor-in-interest, a successor Contractor to operate the Jet Propulsion Laboratory, or the Government.

ASSIGNMENT OF RIGHTS AND DELEGATION OF DUTIES

[CT, FP-NR&D, FP-R&D, T&MC, LH/T&M, FPC, CREI, A - E – 09/04] [FAR 52.232-23(a) – 01/86]

- (1) The Subcontractor may assign its rights to be paid amounts due or to become due as a result of the performance of this Subcontract to a bank, trust company, or other financing institution, including any Federal lending agency. The assignee under such an assignment may thereafter further assign or reassign its right under the original assignment to any type of financing institution described in the preceding sentence.
- (2) Any such assignment or reassignment shall be subject to the following conditions:
 - (a) Any assignment or reassignment authorized under this provision shall cover all amounts payable under this Subcontract, and not paid as of (i) the effective date of assignment or (ii) the date JPL receives written notice of the assignment, whichever is later.
 - (3) No assignment may be made to more than one party, except that an assignment or reassignment may be made to one party as agent or trustee for two or more parties participating in the financing of this Subcontract.
 - (4) Two copies of the notice of assignment, signed by the Subcontractor, shall be furnished to JPL, Attn: Accounts Payable.
 - (5) If a party other than the Subcontractor provides JPL with a notification that the amount due or to become due under this Subcontract has been assigned and that payment is to be made to the claimed assignee, JPL may withhold any payments which are due and payable under the Subcontract until JPL is furnished with either (i) verification or denial of assignment from the Subcontractor or (ii) reasonable proof that the assignment has been made.
 - (6) The Subcontractor shall not furnish or disclose to any assignee under this Subcontract any classified document (which term includes this Subcontract if access to classified material is authorized under this Subcontract) or information pertaining to classified work under this Subcontract unless JPL authorizes such action in writing.
 - (7) No assignment may be made which includes, either specifically or by implication, any delegation of the Subcontractor's duty to perform the services or provide the supplies required by this Subcontract unless such assignment and delegation is consented to by JPL in accordance with the provisions of paragraph (c) below.
- (b) The Subcontractor is prohibited, without prior written JPL consent, from delegating any part of the duties required of it by this Subcontract; provided, however, that nothing contained herein shall be deemed to prohibit the Subcontractor from placing purchase orders and First-tier Subcontracts, subject, however, to the provision of this Subcontract entitled "First-tier Subcontracts." Delegation of duties without such consent is void.

AUDITS AND RECORDS – NEGOTIATION

[CT, FP-NR&D, FP-R&D, T&MC, LH/T&M, FPC, CREI, A – E, RSA – 09/04] [FAR 52.215-2 – 06/99]

(This provision is not applicable for procurements of \$100,000 or less, for commercial items, or for utility services at rates not exceeding those established to apply uniformly to the general public, plus any applicable reasonable connection charge.)

- (1) As used in this Article, “records” includes books, documents, accounting procedures and practices, and other data, regardless of type and regardless of whether such items are in written form, in the form of computer data, or in any other form.
- (2) Examination of Costs. If this is a cost-reimbursement, incentive, time-and-materials, labor-hour, or price-redeterminable Subcontract, or any combination of these, the Subcontractor shall maintain and the Contracting Officer, or an authorized representative of the Contracting Officer, shall have the right to examine and audit all records and other evidence sufficient to reflect properly all costs claimed to have been incurred or anticipated to be incurred directly or indirectly in performance of this Subcontract. This right of examination shall include inspection at all reasonable times of the Subcontractor's plants, or parts of them, engaged in performing the Subcontract.

If this is a facilities acquisition, the obligations and rights specified in this paragraph shall extend to the use of, and charges for the use of, the facilities under this Subcontract.

- (3) Cost or Pricing Data. If the Subcontractor has been required to submit cost or pricing data in connection with pricing action relating to this Subcontract, the Contracting Officer, or an authorized representative of the Contracting Officer, in order to evaluate the accuracy, completeness, and currency of the cost or pricing data, shall have the right to examine and audit all of the Subcontractor's records, including computations and projections, related to:
 - (A) The proposal for the Subcontract, First-tier Subcontract, or modification;
 - (B) The discussions conducted on the proposal(s), including those related to negotiating;
 - (C) Pricing of the Subcontract, First-tier Subcontract, or modification; or
 - (D) Performance of the Subcontract, First-tier Subcontract, or modification.
- (c) Comptroller General.
 - (i) The Comptroller General of the United States, or an authorized representative, shall have access to and the right to examine any of the Subcontractor's directly pertinent records involving transactions related to this Subcontract or a First-tier Subcontract hereunder.
 - (ii) This paragraph (d) may not be construed to require the Subcontractor or First-tier Subcontractor to create or maintain any record that the Subcontractor or First-tier Subcontractor does not maintain in the ordinary course of business or pursuant to a provision of law.
- (d) Reports. If the Subcontractor is required to furnish cost, funding, or performance reports, the Contracting Officer or an authorized representative of the Contracting Officer shall have the right to examine and audit the supporting records and materials, for the purpose of evaluating (i) the effectiveness of the Subcontractor's policies and procedures to produce data compatible with the objectives of these reports and (ii) the data reported.
- (e) Availability. The Subcontractor shall make available at its office at all reasonable times the records, materials, and other evidence described in paragraphs (a), (b), (c), (d), and (e) of this Article, for examination, audit, or reproduction, until three years after final payment under this Subcontract, or for any shorter period specified in Subpart 4.7, Contractor Records Retention, of FAR, and any corresponding implementing or supplementing provisions in the NFS, or for any longer period required by statute or by other Articles of this Subcontract. In addition:
 - (i) If this Subcontract is completely or partially terminated, the Subcontractor shall make available the records relating to the work terminated until 3 years after any resulting final termination settlement; and

- (ii) The Subcontractor shall make available records relating to appeals under the "Disputes" Article or to litigation or the settlement of claims arising under or relating to this Subcontract until such appeals, litigation, or claims are finally resolved.
- (f) The Subcontractor shall insert all of the provisions of this Article, including this paragraph (g), in all First-tier Subcontracts under this Subcontract that exceed \$100,000, and:
 - (A) That are cost-reimbursement, incentive, time-and-materials, labor-hour, or price-redeterminable type or any combination of these;
 - (B) For which cost or pricing data are required; or
 - (C) That require the First-tier Subcontractor to furnish reports as discussed in paragraph (e) of this clause.
- (4) The Article may be altered only as necessary to identify properly the contracting parties and the Contracting Officer under the Government Prime Contract.
- (g) If this is a cost-reimbursement Subcontract with an educational or other nonprofit institution, the provisions of OMB Circular No. A-133, "Audits of Institutions of Higher Learning and Other Nonprofit Institutions," apply to this Subcontract.

AUTHORITY OF JPL REPRESENTATIVES

[CT, FP-NR&D, FP-R&D, T&MC, LH/T&M, FPC, CREI, A – E, RSA – 09/04]

- (i) No request, notice, authorization, direction or order received by the Subcontractor and issued either pursuant to a provision of this Subcontract, to a provision of any document incorporated in this Subcontract by reference, or otherwise, shall be binding upon either the Subcontractor or the Institute unless issued or ratified in writing by the JPL Subcontracts Manager, the Manager, Acquisition Division, JPL, or by representative(s) designated in writing by either of them. Designations of authorized representatives shall define the scope and limitations of the authorized representatives' authorities.
- (ii) The Subcontractor shall immediately notify, in writing, the JPL Subcontracts Manager, or the Manager, Acquisition Division, JPL, whenever a request, notice, authorization, direction, or order has been received from a representative of JPL other than the JPL Subcontracts Manager, or the Manager, Acquisition Division, JPL, which, but for the lack of authorization on the part of the issuing JPL representative, would: (i) effect a change within the meaning of the "Changes" Article; (ii) increase or decrease the Subcontract amount or amount allotted to this Subcontract; or (iii) otherwise be the basis for assertion of a claim by the Subcontractor under any provision of the Subcontract.

AUTHORIZATION AND CONSENT

[CT, FP-R&D, T&MC, LH/T&M, CREI, A – E, RSA – 09/04] [FAR 52.227-1 – 07/95, ALT I]

- (i) The Government authorizes and consents to all use and manufacture of any invention described in and covered by a United States patent in the performance of the Prime Contract or any First-tier Subcontract at any tier.
- (ii) The Subcontractor agrees to include, and require inclusion of, this Article, suitably modified to identify the parties, in all First-tier Subcontracts at any tier for supplies or services (including construction, architect-engineer services, and materials, supplies, models, samples, and design or testing services expected to exceed \$100,000); however, omission of this Article from any First-tier Subcontract, under or over \$100,000, does not affect this authorization and consent.

BANKRUPTCY

[CT, FP-NR&D, FP-R&D, T&MC, LH/T&M, FPC, CREI, A - E – 09/04] [FAR 52.242-13, 07/95]

In the event the Subcontractor enters into proceedings relating to bankruptcy, whether voluntary or involuntary, the Subcontractor agrees to furnish, by certified mail or electronic commerce method authorized by the Subcontract, written notification of the bankruptcy to the JPL Subcontracts Manager responsible for administering the Subcontract. This notification shall be furnished within five days of the initiation of the proceedings relating to bankruptcy filing. This notification shall include the date on which the bankruptcy petition was filed, the identity of the court in which the

bankruptcy petition was filed, and a listing of JPL Subcontract numbers for all JPL Subcontracts against which final payment has not been made. This obligation remains in effect until final payment under this Subcontract.

BUY AMERICAN ACT – SUPPLIES

[CT, FP-NR&D, FP-R&D, CIS, T&MC, LH/T&M, CREI – 09/04] [FAR 52.225-11 - 05/02]

(This Article applies to supply Subcontracts exceeding \$2,500 and to Subcontracts for services which involve the furnishing of supplies when the supply portion of the Subcontract exceeds \$2,500.)

Incorporate by reference FAR 52.225-11, Buy American Act - Supplies.

CHANGES – CREI

[CREI – 08/01] [FAR 52.243-2 – 08/87]

- (1) JPL may at any time, by written Subcontract Unilateral Modification, and without notice to the sureties, if any, make changes within the general scope of this Subcontract in any one or more of the following:
 - (a) Drawings, designs, or specifications.
 - (b) Method of shipment or packing.
 - (c) Place of inspection, delivery, or acceptance.
 - (d) Description of services to be performed.
 - (e) Time of performance (i.e., hours of the day, days of the week, etc.).
 - (f) Place of performance of the services.
 - (g) Requiring additional work or directing the omission of or variation in work covered by this Subcontract when time is of the essence and the change has been coordinated with and is acceptable to the First-tier Subcontractor prior to issuance of the unilateral change.
 - (h) If any such change causes an increase or decrease in the estimated cost of, or the time required for, performance of any part of the work under this Subcontract, whether or not changed by the Modification, or otherwise affects any other terms and conditions of this Subcontract, JPL shall make an equitable adjustment in the (i) estimated cost, delivery or completion schedule, or both; and (ii) other affected terms, and shall modify the Subcontract accordingly.
 - (i) The Subcontractor must assert its right to an adjustment under this Article within 30 days from the date of receipt of the Modification. However, if JPL decides that the facts justify it, JPL may receive and act upon a proposal submitted before final payment of the Subcontract.
 - (j) (RESERVED)
 - (k) Except as provided in paragraph (f) below, nothing contained in this Article shall excuse the Subcontractor from proceeding with the prosecution of the work as modified.
 - (l) Notwithstanding the provisions of paragraphs (a) and (b) above, the estimated cost of this Subcontract and, if this Subcontract is incrementally funded, the funds allotted for the performance of this Subcontract, shall not be increased or considered to be increased except by specific written modification of the Subcontract indicating the new Subcontract estimated cost and, if this Subcontract is incrementally funded, the new amount allotted to the Subcontract. Until this modification is made, the Subcontractor shall not be obligated to continue performance or incur costs beyond the point established in the Limitation of Cost or Limitation of Funds Article of this Subcontract.

COMPLIANCE WITH THE AMERICANS WITH DISABILITIES ACT

[CT, CREI – 08/01]

(Work performed outside the United States is exempt from the requirements of this Article.)

- (1) Subcontractor agrees to comply with the Americans with Disabilities Act (42 U.S.C. 12101, et. seq.) and all implementing regulations.
- (2) Subcontractor agrees to insert this Article, including this paragraph (b), in all First-tier Subcontracts and purchase orders hereunder.

COST ACCOUNTING STANDARDS (EDUCATIONAL INSTITUTION), AND ADMINISTRATION OF COST ACCOUNTING STANDARDS

[CREI – 09/04] [FAR 52.230-5 – 04/98; FAR 52.230-6 – 11/99]

(This Article is applicable if the basic Subcontract or any modification exceeds \$500,000.)

FAR 52.230-5, Cost Accounting Standards - Educational Institution, is incorporated by reference; any reference to the Contracts Disputes Act shall refer to the Disputes provision, if any, in this Subcontract. FAR 52.230-6, Administration of Cost Accounting Standards, is incorporated by reference.

CROSS-WAIVERS OF LIABILITY FOR SPACE SHUTTLE SERVICES, NASA EXPENDABLE LAUNCH VEHICLE (ELV) LAUNCHES, AND FOR SPACE STATION ACTIVITIES

[CREI – 08/01] [NFS 1852.228-72 – 09/93; 1852.228-78 – 09/93; 1852.228-76 – 12/94]

(This Article is applicable if the Subcontract value is \$100,000 or more.)

The Subcontractor understands that the work performed under this Subcontract may be in support of "Protected Space Operations" as defined in the three paragraphs (b)(5) under Part A, Part B, and Part C below, and therefore agrees to all three cross-waiver provisions set forth below. The Subcontractor shall incorporate this Article into First-tier Subcontracts that are for \$100,000 or more.

PART A. CROSS-WAIVER OF LIABILITY FOR SPACE SHUTTLE SERVICES

- (1) As prescribed by regulation (14 C.F.R. Part 1266), NASA agreements involving Space Shuttle services are required to contain broad cross-waivers of liability among the parties and the parties' related entities to encourage participation in space exploration, use, and investment. The purpose of this provision is to extend this cross-waiver requirement to Subcontractors and related entities under their Subcontracts. This cross-waiver of liability shall be broadly construed to achieve the objective of encouraging participation in space activities.
- (2) As used in this provision, the term:
 - (A) "Subcontractors" and "First-tier Subcontractors" include suppliers of any kind.
 - (B) "Damage" means:
 - (A) Bodily injury to, or other impairment of health of, or death of, any person;
 - (B) Damage to, loss of, or loss of use of any property;
 - (C) Loss of revenue or profits; or
 - (D) Other direct, indirect, or consequential damage;
- (3) "Party" means a person or entity that signs an agreement involving a Space Shuttle service;
- (4) "Payload" means any property to be flown or used on or in the Space Shuttle; and
- (5) "Protected Space Operations" means all Space Shuttle and payload activities on Earth, in outer space, or in transit between Earth and outer space performed in furtherance of an agreement involving Space Shuttle services or performed under this Subcontract. "Protected Space Operations" excludes activities on Earth which are conducted on return from space to develop further a payload's product or process except when such development is for Space Shuttle-related activities necessary to implement an agreement involving Space Shuttle services or to perform this Subcontract. It includes, but is not limited to:
 - (A) Research, design, development, test, manufacture, assembly, integration, operation, or use of the Space Shuttle, transfer vehicles, payloads, related support equipment, and facilities and services;
 - (B) All activities related to ground support, test, training, simulation, or guidance and control equipment and related facilities or services.
- (6) "Related entity" means:
 - (A) A party's Subcontractors or First-tier Subcontractors at any tier;
 - (B) A party's users or customers at any tier; or

(C) A Subcontractor or First-tier Subcontractor of a party's user or customer at any tier.

(m)

- (1) The Subcontractor agrees to a waiver of liability pursuant to which the Subcontractor waives all claims against any of the entities or persons listed in paragraphs (c)(1)(A) through (c)(1)(C) of this provision based on damage arising out of Protected Space Operations. This waiver shall apply only if the person, entity, or property causing the damage is involved in Protected Space Operations and the person, entity, or property damaged is damaged by virtue of its involvement in Protected Space Operations. The waiver shall apply to any claims for damage, whatever the legal basis for such claims, including but not limited to delict (a term used in civil law countries to denote a class of cases similar to tort) and tort (including negligence of every degree and kind) and Subcontract, against:
 - (1) Any party other than the Government;
 - (D) A related entity of any party other than the Government; and
 - (E) The employees of any of the entities identified in (c)(1)(A) and (c)(1)(B) above.
- (2) The Subcontractor agrees to extend the waiver of liability as set forth in paragraph (c)(1) of this provision to First-tier Subcontractors at any tier by requiring them, by Subcontract or otherwise, to agree to waive all claims against the entities or persons identified in paragraphs (c)(1)(A) through (c)(1)(C) of this provision.
- (3) For avoidance of doubt, this cross-waiver includes a cross-waiver of liability arising from the Convention on International Liability for Damage Caused by Space Objects (March 29, 1972, 24 United States Treaties and other International Agreements (U.S.T.) 2389, Treaties and Other International Acts Series (T.I.A.S.) No. 7762), in which the person, entity, or property causing the damage is involved in Protected Space Operations, and the person, entity, or property damaged is damaged by virtue of its involvement in Protected Space Operations.
- (4) Notwithstanding the other provisions of this provision, this waiver of liability shall not be applicable to:
 - (1) Claims between any party and its related entities or claims between any party's related entities (e.g., claims between the Government and the Subcontractor are included within this exception);
 - (F) Claims made by a natural person, his/her estate, survivors, or subrogees for injury or death of such natural person;
 - (G) Claims for damage caused by willful misconduct; and
 - (H) Intellectual property claims.
 - (2) Nothing in this section shall be construed to create the basis for a claim or suit where none would otherwise exist.

PART B. CROSS-WAIVER OF LIABILITY FOR NASA EXPENDABLE LAUNCH VEHICLE (ELV) LAUNCHES

- (a) As prescribed by regulation (14 C.F.R. Part 1266), NASA agreements involving ELV launches are required to contain broad cross-waivers of liability among the parties and the parties related entities to encourage participation in space exploration, use, and investment. The purpose of this provision is to extend this cross-waiver requirement to Subcontractors and First-tier Subcontractors as related entities of NASA. This cross-waiver of liability shall be broadly construed to achieve the objective of encouraging participation in space activities.
- (b) As used in this provision, the term:
 - (1) "Subcontractors" and "First-tier Subcontractors" include suppliers of any kind.
 - (2) "Damage" means:
 - Bodily injury to, or other impairment of health of, or death of, any person;
 - Damage to, loss of, or loss of use of any property;
 - Loss of revenue or profits; or

Other direct, indirect, or consequential damage;

- (3) "Party" means a person or entity that signs an agreement involving an ELV launch;
 - (4) "Payload" means any property to be flown or used on or in the ELV; and
 - (5) "Protected Space Operations" means all ELV and payload activities on Earth, in outer space, or in transit between Earth and outer space performed in furtherance of an agreement involving an ELV launch or performed under the Subcontract. "Protected Space Operations" excludes activities on Earth which are conducted on return from space to develop further a payload's product or process except when such development is for ELV-related activities necessary to implement an agreement involving an ELV launch or to perform the Subcontract. It includes, but is not limited to:
 - (1) Research, design, development, test, manufacture, assembly, integration, operation, or use of ELVs, transfer vehicles, payloads, related support equipment, and facilities and services;
 - (I) All activities related to ground support, test, training, simulation, or guidance and control equipment and related facilities or services.
 - (2) "Related entity" means:
 - (A) A party's Subcontractors or First-tier Subcontractors at any tier;
 - (B) A party's users or customers at any tier; or
 - (C) A Subcontractor or First-tier Subcontractor of a party's user or customer at any tier.
- (c)
- (a) The Subcontractor agrees to a waiver of liability pursuant to which the Subcontractor waives all claims against any of the entities or persons listed in paragraphs (c)(1)(A) through (c)(1)(C) of this provision based on damage arising out of Protected Space Operations. This waiver shall apply only if the person, entity, or property causing the damage is involved in Protected Space Operations and the person, entity, or property damaged is damaged by virtue of its involvement in Protected Space Operations. The waiver shall apply to any claims for damage, whatever the legal basis for such claims, including but not limited to a delict (a term used in civil law countries to denote a class of cases similar to tort) and tort (including negligence of every degree and kind) and Subcontract, against:
 - (a) Any party other than the Government;
 - (D) A related entity of any party other than the Government; and
 - (E) The employees of any of the entities identified in (c)(1)(A) and (B) above.
 - (3) The Subcontractor agrees to extend the waiver of liability as set forth in paragraph (c)(1) of this provision to First-tier Subcontractors at any tier by requiring them, by Subcontract or otherwise, to agree to waive all claims against the entities or persons identified in paragraphs (c)(1)(A) through (c)(1)(C) of this provision.
 - (4) For avoidance of doubt, this cross-waiver includes a cross-waiver of liability arising from the Convention on International Liability for Damage Caused by Space Objects (March 29, 1972, 24 United States Treaties and other International Agreements (U.S.T.) 2389, Treaties and Other International Acts Series (T.I.A.S.) No. 7762), in which the person, entity, or property causing the damage is involved in Protected Space Operations.
 - (5) Notwithstanding the other provisions of this provision, this waiver of liability shall not be applicable to:
 - (1) Claims between any party and its related entities or claims between any party's related entities (e.g., claims between the Government and the Subcontractor are included within this exception);
 - (F) Claims made by a natural person, his/her estate, survivors, or subrogees for injury or death of such natural person;
 - (G) Claims for damage caused by willful misconduct; and
 - (H) Intellectual property claims.
 - (2) Nothing in this section shall be construed to create the basis for a claim or suit where none would otherwise exist.

- (3) This cross-waiver shall not be applicable when the Commercial Space Launch Act cross-waiver (49 U.S.C. App. 2615) is applicable.

PART C. CROSS-WAIVER OF LIABILITY FOR SPACE STATION ACTIVITIES

- (A) The Intergovernmental Agreement for Space Station Freedom contains a broad cross-waiver provision to encourage participation in the exploration and use of outer space through the Space Station. The purpose of this provision is to extend this cross-waiver requirement to Subcontractors and First-tier Subcontractors as related entities of NASA. This cross-waiver of liability shall be broadly construed to achieve this objective of encouraging participation in space activities.
- (B) As used in this provision, the term:
- (1) "Damage" means:
- (A) Bodily injury to, or other impairment of health of, or death of, any person;
 - (B) Damage to, loss of, or loss of use of any property;
 - (C) Loss of revenue or profits; or
 - (D) Other direct, indirect, or consequential damage.
- (2) "Launch Vehicle" means an object (or any part thereof) intended for launch, launched from Earth, or returning to Earth that carries payloads or persons, or both.
- (3) "Partner State" means each contracting party for which the "Agreement among the Government of the United States of America, Governments of Member States of the European Space Agency, Government of Japan, and the Government of Canada on Cooperation in the Detailed Design, Development, Operation, and Utilization of the Permanently Manned Civil Space Station" (the "Intergovernmental Agreement") has entered into force, in accordance with Article 25 of the Intergovernmental Agreement, and also includes any future signatories of the Intergovernmental Agreement. It includes the Cooperating Agency of a Partner State. The National Aeronautics and Space Administration (NASA) for the United States, the Canadian Space Agency (CSA) for the Government of Canada, the European Space Agency (ESA) and the Science and Technology Agency of Japan (STA) are the Cooperating Agencies responsible for implementing Space Station cooperation. A Partner State also includes any entity specified in the Memorandum of Understanding (MOU) between NASA and the Government of Japan to assist the Government of Japan Cooperating Agency in the implementation of that MOU.
- (4) "Payload" means any property to be flown or used on or in a launch vehicle or the Space Station.
- (5) "Protected Space Operations" means all launch vehicle activities, space station activities, and payload activities on Earth, in outer space, or in transit between Earth and outer space performed in furtherance of the Intergovernmental Agreement or performed under this Subcontract. "Protected Space Operations" also includes all activities related to evolution of the Space Station as provided for in Article 14 of the Intergovernmental Agreement. "Protected Space Operations" excludes activities on Earth which are conducted on return from the Space Station to develop further a payload's product or process except when such development is for Space Station-related activities in implementation of the Intergovernmental Agreement or in performance of this Subcontract. It includes, but is not limited to:
- (1) Research, design, development, test, manufacture, assembly, integration, operation, or use of launch or transfer vehicles, payloads, related support equipment, and facilities and services;
- (E) All activities related to ground support, test, training, simulation, or guidance and control equipment and related facilities or services.
- (2) "Related entity" means:
- (A) A Partner State's Subcontractors or First-tier Subcontracts at any tier;
 - (B) A Partner State's users or customers at any tier; or
 - (C) A Subcontractor or First-tier Subcontractor of a Partner State's user or customer at any tier.

- (3) "Subcontractors" and "First-tier Subcontractors" include suppliers of any kind.

(b)

- (1) The Subcontractor agrees to a cross-waiver of liability pursuant to which the Subcontractor waives all claims against any of the entities or persons listed in paragraphs (c)(1)(A) through (c)(1)(C) of this provision based on damage arising out of Protected Space Operations. This waiver shall apply only if the person, entity, or property causing the damage is involved in Protected Space Operations and the person, entity, or property damaged is damaged by virtue of its involvement in Protected Space Operations. The cross-waiver shall apply to any claims for damage, whatever the legal basis for such claims, including but not limited to delict (a term used in civil law countries to denote a class of cases similar to tort) and tort (including negligence of every degree and kind) and Subcontract against:
 - (A) Any Partner State other than the United States;
 - (B) A related entity of any Partner State other than the United States; and
 - (C) The employees of any of the entities identified in paragraphs (c)(1)(A) and (B) above.
- (2) The Subcontractor agrees to extend the waiver of liability as set forth in paragraph (c)(1) of this provision to First-tier Subcontractors at any tier by requiring them, by Subcontract or otherwise, to agree to waive all claims against the entities or persons identified in paragraphs (c)(1)(A) through (c)(1)(C) of this provision.
- (3) For avoidance of doubt, this cross-waiver includes a cross-waiver of liability arising from the Convention on International Liability for Damage Caused by Space Objects (March 29, 1972, 24 United States Treaties and Other International Agreements (U.S.T.) 2389, Treaties and other International Acts Series (T.I.A.S.) No. 7762), in which the person, entity, or property causing the damage is involved in Protected Space Operations.
- (4) Notwithstanding the other provisions of this provision, this cross- waiver of liability shall not be applicable to:
 - (i) Claims between the United States and its related entities or claims between the related entities of any Partner State (e.g., claims between the Government and the Subcontractor are included within this exception);
 - (D) Claims made by a natural person, his/her estate, survivors, or subrogees for injury or death of such natural person;
 - (E) Claims for damage caused by willful misconduct; and
 - (F) Intellectual property claims.
- (5) Nothing in this section shall be construed to create the basis for a claim or suit where none would otherwise exist.

DATA REMOVAL FROM COMPUTERS

[CT, FP-NR&D, FP-R&D, CIS, LH/T&M, T&MC, FPC, CREI, A – E, RSA – 12/04] [NPG 2810]

The Subcontractor shall completely overwrite or degauss the media containing all data (which can include sensitive, Privacy Act, proprietary, and mission critical data) from hard drives and other computer storage devices and remove licensed software from Government-owned computers before such computers leave the control of the Subcontractor organization by transfer or disposal. JPL data shall also be removed from Subcontractor-owned computers when the computer leaves the control of the Subcontractor. The Subcontractor shall archive all data required to be retained, pursuant to the "Rights in Data - General" Article. Guidance on what constitutes mission-critical data and sensitive information (such as business and restricted technology information and scientific, engineering, and research information) is contained in NASA Procedure and Guidelines for Security of Information Technology (NPG) 2810, available on the worldwide web or from the JPL Subcontracts Manager. Proprietary data consists of trade secrets and other commercial or financial information confidential to the individual owner or organization. Proprietary data is normally labeled as such. Trade secrets or commercial or financial information that has been released to the public or is otherwise in the possession of persons other than the individual owner or organization is in the public domain and may no longer be entitled to proprietary protection.

The Subcontractor shall submit to JPL a written certification that media containing all JPL data has been overwritten or degaussed from computers when returned to JPL or disposed of.

DEFENSE PRIORITY AND ALLOCATION REQUIREMENTS

[CT, FP-NR&D, FP-R&D, T&MC, LH/T&M, FPC, CREI, A - E – 09/04] [FAR 52.211-15 – 09/90]

Incorporate by reference FAR 52.211-15, Defense Priority and Allocation Requirements.

DEFINITIONS

[CREI – 09/04] [FAR 52.202-1 – 12/01]

As used throughout this Subcontract, the following terms shall have the meanings set forth below:

- (A) The term “Administrator” means the Administrator or Deputy Administrator of the National Aeronautics and Space Administration.
- (B) The term “commercial component” means any component that is a commercial item.
- (C) The term “commercial item” means (see related term “nondevelopmental item,” below):
 - (1) Any item, other than real property, that is of a type customarily used by the general public or by non-governmental entities for purposes other than governmental purposes and that:
 - (1) Has been sold, leased, or licensed to the general public; or
 - (D) Has been offered for sale, lease, or license to the general public;
 - (2) Any item that evolved from an item described in paragraph (c)(1) of this Article through advances in technology or performance and that is not yet available in the commercial marketplace, but will be available in the commercial marketplace in time to satisfy the delivery requirements under a solicitation;
 - (3) Any item that would satisfy a criterion expressed in paragraphs (c)(1) or (2) of this Article, but for:
- (a) Modifications of a type customarily available in the commercial marketplace; or
 - (E) Minor modifications of a type not customarily available in the commercial marketplace made to meet JPL or Federal Government requirements. “Minor” modifications means modifications that do not significantly alter the nongovernmental function or essential physical characteristics of an item or component, or change the purpose of a process. Factors to be considered in determining whether a modification is minor include the value and size of the modification and the comparative value and size of the final product. Dollar values and percentages may be used as guideposts, but are not conclusive evidence that a modification is minor;
- (4) Any combination of items meeting the requirements of paragraphs (c)(1), (2), (3), or (5) of this Article that are of a type customarily combined and sold in combination to the general public;
- (5) Installation services, maintenance services, repair services, training services, and other services if:
 - (1) Such services are procured for support of an item referred to in paragraph (c)1), (2), (3), or (4) of this definition, regardless of whether such services are provided by the same source or at the same time as the item; and
 - (F) The source of such services provides similar services contemporaneously to the general public under terms and conditions similar to those offered to the Federal Government;
- (2) Services of a type offered and sold competitively in substantial quantities in the commercial marketplace based on established catalog or market prices for specific tasks performed under standard commercial terms and conditions. This does not include services that are sold based on hourly rates without an established catalog or market price for a specific service performed; For purposes of these services:
 - (1) Catalog price" means a price included in a catalog, price list, schedule, or other form that is regularly maintained by the manufacturer or supplier, is either published or otherwise available for inspection by customers, and states prices at which sales are currently, or were last, made to a significant number of buyers constituting the general public; and
 - (G) "Market prices" means current prices that are established in the course of ordinary trade between buyers and sellers free to bargain and that can be substantiated through competition or from sources independent of the offerors.

- (2) Any item, combination of items, or service referred to in subparagraphs (c)(1) through (6), notwithstanding the fact that the item, combination of items, or service is transferred between or among separate divisions, subsidiaries, or affiliates of a Subcontractor; or
 - (3) A nondevelopmental item, if the procuring activity determines the item was developed exclusively at private expense and sold in substantial quantities, on a competitive basis, to multiple State and local Governments (see definition below).
- (b) The term "component" means any item supplied as part of an end item or of another component, except that for use in 52.225-9, and 52.225-11, see the definitions in 52.225-9(a) and 52.225-11(a).
 - (c) The term "Subcontract amount" means the Subcontract price, the estimated cost and fee, if any, or the ceiling price of the Subcontract.
 - (d) The term "Contracting Officer" means the Government Contracting Officer for the Prime Contract. The term includes certain authorized representatives of the Contracting Officer acting within the limits of their authority as delegated by the Contracting Officer.
 - (e) The term "Subcontractor" means the selling party to this Subcontract/Order with the California Institute of Technology (the Institute)/JPL being the buying party. The "Subcontractor" is the first tier subcontractor under the NASA Prime Contract between NASA and the Institute/JPL.
 - (f)
 - (1) The term "FAR" means the Federal Acquisition Regulation as in effect on the date of this Subcontract, unless otherwise indicated.
 - (2) When FAR or NFS is incorporated by reference within a GP, it is meant to be incorporated with appropriate changes in identification of the parties ("JPL" in addition to or instead of the Government, and "JPL Subcontracts Manager" in addition to or instead of the Contracting Officer, as the context dictates).
 - (3) Any reference to the Contract Disputes Act is meant to refer to the Disputes provision in this Subcontract if any.
 - (g) The term "Government" means the Government of the United States of America, unless the context is otherwise.
 - (h) The term "Government-furnished property (GFP)" includes JPL-furnished, Government-owned property.
 - (i) The term "Institute" means the California Institute of Technology as a party to this Subcontract.
 - (j) The term "JPL" means the Jet Propulsion Laboratory as the organizational element of the Institute having responsibility for administration of this Subcontract. The rights of JPL under this Subcontract are the rights of the California Institute of Technology as a party to this Subcontract.
 - (k) The term "JPL Subcontracts Manager" means the individual authorized to issue and administer this Subcontract for JPL.
 - (l) The term "NASA" means the National Aeronautics and Space Administration.
 - (m) The term "NFS" means the NASA FAR Supplement as in effect on the date of this Subcontract, unless otherwise indicated.
 - (n) The term "nondevelopmental item" means:
 - (A) Any previously developed item of supply used exclusively for governmental purposes by a Federal agency, a State or local government, or a foreign government with which the United States has a mutual defense cooperation agreement;
 - (B) Any item described in paragraph (p)(1) of this definition that requires only minor modification or modifications of a type customarily available in the commercial marketplace in order to meet the requirements of the procuring activity; or
 - (C) Any item of supply being produced that does not meet the requirements of paragraph (p)(1) or (2) solely because the item is not yet in use.
 - (o) The term "person" means any individual, partnership, corporation, association, institution or other entity.

- (p) The term "Prime Subcontract" means the Subcontract between the Institute and NASA for the United States of America (herein called the Government).
- (q) The term "Schedule" means the statements in the order/Subcontract, including statement of work, description of items to be supplied, delivery dates, special provisions, options and any other statements excluding the General Provisions (the term "General Provisions" includes any "Additional General Provisions"), and any proposals, specifications or other documents or provisions which are made a part of this Subcontract by reference or otherwise.
- (r) The term "First-tier Subcontract," as used in this Subcontract, includes, but is not limited to, purchase orders under this Subcontract.
- (s) The terms "United States" or "U.S." mean the United States of America.

DESIGNATION OF NEW TECHNOLOGY REPRESENTATIVE AND PATENT REPRESENTATIVE

[CREI – 10/04] [NFS 1852, 227-72-06197]

For purposes of administration of the clause of this Subcontract entitled "New Technology" or "Patent Rights--Retention by the Subcontractor (Short Form)," whichever is included, the following named representatives are hereby designated to administer such clause:

Title	Office Code	Address (including zip code)
New Technology Representative	S/J 180-801	NASA Management Office at JPL 4800 Oak Grove Drive Pasadena, CA 91109
Patent Representative	S/J 180-802	NASA Management Office at JPL 4800 Oak Grove Drive Pasadena, CA 911099

Reports of reportable items, and disclosure of subject inventions, interim reports, final reports, utilization reports, and other reports required by the clause, as well as any correspondence with respect to such matters, should be directed to the New Technology Representative unless transmitted in response to correspondence or request from the Patent Representative. Inquires or requests regarding disposition of rights, election of rights, or related matters should be directed to the Patent Representative. This clause shall be included in any First-tier Subcontract hereunder requiring a "New Technology" clause or "Patent Rights--Retention by the Contractor (Short Form)" clause, unless otherwise authorized or directed by the Contracting Officer. The respective responsibilities and authorities of the above-named representatives are set forth in 1827.305-370 of the NASA FAR Supplement.

DISPUTES

[CREI – 04/00] [FAR 52.233-1 – 07/02]

- (1) Any dispute arising under or relating to this Subcontract that is not settled by agreement of the parties or pursuant to paragraph (b) below may be settled by appropriate legal proceedings. Pending any binding or conclusive decision, appeal, or judgment referred to in this Article or the settlement of any such dispute, the Subcontractor shall proceed diligently with the performance of this Subcontract.
- (2) Notwithstanding any provisions herein to the contrary:
 - (1) If a decision on any question of fact arising under the Prime Contract is made by the Contracting Officer and such question of fact is also related to this Subcontract, said decision, if binding upon the Institute under the Prime Contract, shall in turn be binding upon the Institute and the Subcontractor with respect to such question insofar as it relates to this Subcontract; provided, however, that if the Subcontractor is adversely affected by any such decision made by the Contracting Officer, and if the Institute elects not to appeal such

decision pursuant to the "Disputes" clause of the Prime Contract, the Institute shall notify the Subcontractor within 10 days after receipt by the Institute of a copy of the decision. Notification of the Subcontractor shall be deemed to have been made upon deposit by the Institute of a notice in the mail properly addressed to the Subcontractor or upon actual delivery of the Notice to Subcontractor by the Institute. The Subcontractor shall thereupon have the right reserved to the Institute under the Prime Contract to prosecute an appeal, in the name of the Institute, to the Administrator within 30 days after receipt by the Institute of a copy of the Contracting Officer's decision. Any decision upon appeal either by the Institute or by the Subcontractor in the Institute's name, if binding upon the Institute under the Prime Contract, shall in turn be binding upon the Subcontractor and the Institute with respect to such question of fact insofar as it relates to this Subcontract. The Institute is not required under the provisions of this Article to certify or submit, or permit the Subcontractor to do so in the Institute's name, such claims to the Government as the Institute does not believe the Government is liable for under the provisions of the Prime Contract and the Contract Disputes Act of 1978.

- (2) If a decision is made by any representative of the Government on any question of fact and/or law arising under the Prime Contract which is also related to this Subcontract, from which an appeal under the "Disputes" clause in the Prime Contract is not available, said decision, if binding upon the Institute under the Prime Contract, shall in turn be binding upon the Subcontractor and the Institute with respect to such question insofar as it relates to this Subcontract; provided, however, that if the Subcontractor is adversely affected by any such decision, or if the Subcontractor is adversely affected by any decision upon an appeal referred to in paragraph (1) above, and if the Institute elects not to bring suit against the Government with respect to such decision, the Institute shall notify the Subcontractor with reasonable promptness. The Subcontractor shall thereupon have any right that the Institute would have to prosecute a suit against the Government in the Institute's name. Failure to exercise such right shall preclude the Subcontractor from objecting to the adverse conclusion or result under this Subcontract. A final judgment in any such suit shall be conclusive upon the Subcontractor and the Institute under this Subcontract. The Institute is not required under the provisions of this Article to certify or submit, or permit the Subcontractor to do so in the Institute's name, such claims to the Government as the Institute does not believe the Government is liable for under the provisions of the Prime Contract and the Contract Disputes Act of 1978.
- (3) All costs and expenses of any such appeal or suit prosecuted by the Subcontractor shall be paid by the Subcontractor, without prejudice to any right the Subcontractor may otherwise have to recovery or allowance thereof.
- (4) If as a result of any decision or judgment which is binding upon the Subcontractor and the Institute, as provided above, the Institute is unable to obtain reimbursement from the Government under the Prime Subcontract for, or is required to refund or credit to the Government, any amount with respect to any item of cost for which the Institute has reimbursed the Subcontractor, the Subcontractor shall, on demand, promptly repay such amount to the Institute. Additionally, pending the final conclusion of any appeal and/or suit hereunder, the Institute may demand, and upon such demand the Subcontractor shall pay over to the Institute, any amount which the Government has disallowed or suspended under the Prime Contract and which arises out of this Subcontract.

DRUG-FREE WORKPLACE REQUIREMENTS

[CT, FP-NR&D, FP-R&D, CIS, T&MC, LH/T&M, FPC, CREI, A - E – 09/04] [FAR 52.223-6 – 05/01]

The Subcontractor agrees to inform all Subcontractor personnel who work at JPL or are involved with any JPL activity on or off JPL premises that they are required to comply with the JPL "Drug Free Workplace Policy." The Subcontractor further agrees to inform all Subcontractor personnel, working at JPL or involved with any JPL activity on or off JPL premises that JPL's policy is to fully comply with the requirements of the Drug-Free Workplace Act and that Subcontractor personnel are required to comply with JPL's policy of maintaining a drug-free workplace.

ELECTRICAL EQUIPMENT ACQUISITION

[CT, FP-NR&D, FP-R&D, CIS, T&MC, LH/T&M, FPC, CREI – 09/04]

(This Article is applicable if the Subcontract involves acquisition of off-the-shelf electrical equipment for delivery to or use by JPL or its designees.)

The electrical equipment being provided by the Subcontractor under this Subcontract shall be listed by Underwriters Laboratory, Factory Mutual Insurance Association, Canadian Standards Association, or similar organization of

recognized standing. In the event that the equipment does not carry an appropriate approval, the individual components making up the item must be listed. Proof of listing shall be provided with delivery of the equipment in the form of accompanying data or labels. Any item not conforming to these requirements may be returned to the Subcontractor at the Subcontractor's expense. The Subcontractor agrees to require First-tier Subcontractors, if any, which supply electrical equipment for delivery to or use by JPL or its designees to comply with this Article.

EMPLOYMENT REPORTS ON SPECIAL DISABLED VETERANS, VETERANS OF THE VIETNAM ERA, AND OTHER ELIGIBLE VETERANS

[CT, FP-NR&D, FP-R&D, T&MC, LH/T&M, FPC, CREI, A – E, RSA, CIS – 09/04] [FAR 52.222-35 – 12/01]

(This Article is applicable to this Subcontract (and any First-tier Subcontract) when the Article at 52.22-35, Equal Opportunity for Special Disabled Veterans, Veterans of the Vietnam Era, and Other Eligible Veterans is applicable.)

Incorporate by reference FAR 52.222-37, Employment Reports on Special Disabled Veterans, Veterans of the Vietnam Era, and Other Eligible Veterans.

ENVIRONMENTAL COMPLIANCE

[CT, FP-NR&D, FP-R&D, T&MC, LH/T&M, FPC, CREI, A - E – 09/04] [FAR 52.223-11 – 05/01; 52.223-12 – 05/95]

(This Article is applicable to all Subcontracts to be performed at least partially within the United States, its possessions, and Puerto Rico.)

- (a) Environmental Compliance. Environmental controls shall be in accordance with all applicable Federal, State and local regulatory requirements and in accordance with all applicable Executive Orders of the President. In addition the Subcontractor shall comply with the provisions set forth below.
- (b) The Subcontractor shall comply with the applicable requirements of Sections 608 and 609 of the Clean Air Act (42 U.S.C.7671g and 7671h) as each or both apply to this Subcontract.
- (c)
- (a) Definition. "Ozone-depleting substance", as used in this clause, means any substance the Environmental Protection Agency (EPA) designates in 40 CFR Part 82 as: (i) Class I, including but not limited to chlorofluorocarbons, halons, carbon tetrachloride, and methyl chloroform; or (ii) Class II, including, but not limited to, hydrochlorofluorocarbons.
- (b) The Subcontractor shall label products which contain or are manufactured with ozone-depleting substances in the manner and to the extent required by 42 U.S.C. 7671j (b), (c), and (d) and 40 CFR Part 82, Subpart E, as follows:

WARNING

Contains (or manufactured with, if applicable) (*)_____, a substance(s) which harm(s) public health and environment by destroying ozone in the upper atmosphere.

(* The Subcontractor shall insert the name of the substance(s))

EQUAL OPPORTUNITY

[CT, FP-NR&D, FP-R&D, CIS, T&MC, LH/T&M, FPC, CREI, A – E, RSA – 09/04] [FAR 52.222-26 – 04/02]

(The following Article is applicable unless this Subcontract is exempt under the rules, regulations, and relevant orders of the Secretary of Labor issued under Executive Order 11246, as amended; for example, work performed outside the United States by employees recruited outside who were not recruited within the United States is exempt from the requirements of this Article. If, during any 12-month period [including the 12 months preceding the award of this Subcontract], the Subcontractor has been or is awarded nonexempt Federal Subcontracts and/or First-tier Subcontracts that have an aggregate value in excess of \$10,000, the Subcontractor shall comply with FAR 52.222-26 during performance of this Subcontract. Upon request, the Subcontractor shall provide information necessary to determine the applicability of this Article.)

Incorporate by reference FAR 52.222-26, Equal Opportunity (E.O. 11246).

EQUAL OPPORTUNITY FOR SPECIAL DISABLED VETERANS, VETERANS OF THE VIETNAM ERA, AND OTHER ELIGIBLE VETERANS

[CT, FP-NR&D, FP-R&D, CIS, T&MC, LH/T&M, FPC, CREI, A – E, RSA – 09/04] [FAR 52.222-35 - 12/01]

(This Article applies to Subcontracts of \$25,000 or more, unless the work is performed outside the United States by employees recruited outside the United States.)

Incorporate by reference 52.222-35, Equal Opportunity for Special Disabled Veterans, Veterans of the Vietnam Era, and Other Eligible Veterans (38 U.S.C. 4212).

EXISTING COMMERCIAL COMPUTER SOFTWARE – LICENSING

[CT, FP-NR&D, FP-R&D, CIS, T&MC, LH/T&M, CREI – 09/04] [NFS 1852.227-86 – 12/87]

(This Article is applicable to the acquisition of any existing commercial computer software under this Subcontract.)

- (1) Any delivered commercial computer software (including documentation thereof) developed at private expense and claimed as proprietary shall be subject to the restricted rights in paragraph (d) below. Where the Supplier/Subcontractor proposes its standard commercial software license, only those applicable portions thereof which comply with the other provisions of this Subcontract, Federal laws, FAR and NFS, including the restricted rights in paragraph (d) below, are incorporated into and made a part of this Purchase Order/Subcontract.
- (2) Although the Supplier/Subcontractor might not propose its standard commercial software license until after this Purchase Order/Subcontract has been issued, or at or after the time the computer software is delivered, such license shall nevertheless be deemed incorporated into and made a part of this Purchase Order/Subcontract under the same terms and conditions as in paragraph (a) above. For purposes of receiving updates, correction notices, consultation, and similar activities on the computer software, any authorized user may acknowledge receipt of a registration form or card and return it directly to the Supplier/Subcontractor; however, such signing shall not add to or alter any of the terms and conditions of this Article or the Purchase Order/Subcontract into which this Article is incorporated.
- (3) The Supplier's/Subcontractor's acceptance is expressly limited to the terms and conditions of this Purchase Order/Subcontract. If the specified computer software is shipped or delivered to JPL or NASA, it shall be understood that the Supplier/Subcontractor has unconditionally accepted the terms and conditions set forth in this Article, and that the terms and conditions of this Purchase Order/Subcontract (including the incorporated license) constitute the entire agreement between the parties concerning rights in the computer software.
- (4) The following restricted rights shall apply:
 - (1) The commercial computer software may not be used, reproduced, or disclosed by the Institute or the Government except as provided below or otherwise expressly stated in the Purchase Order/Subcontract.
 - (2) The commercial computer software may be:
 - (a) Used, or copied for use, in or with any computer owned or leased by, or on behalf of, the Government, or the Institute in support and furtherance of its Government Subcontract obligations; provided, the software is not used, nor copied for use, in or with more than one computer simultaneously, unless otherwise permitted by the license incorporated under paragraphs (a) or (b) above;
 - (D) Reproduced for safekeeping (archives) or backup purposes;
 - (E) Modified, adapted, or combined with other computer software, provided that the modified, combined, or adapted portions of the derivative software incorporating restricted computer software shall be subject to the same restricted rights; and
 - (F) Disclosed and reproduced for use by Government or Institute Subcontractors or their First-tier Subcontractors in accordance with the restricted rights in subdivisions (A), (B), and (C) above; provided they have the Government's or the Institute's permission to use the computer software and have also agreed to protect the computer software from unauthorized use and disclosure.
 - (3) If the incorporated Supplier's/Subcontractor's software license contains provisions or rights that are less restrictive than the restricted rights in subparagraph (d)(2) above, then the less restrictive provisions or rights shall prevail.
 - (4) If the computer software is published, copyrighted computer software, it is licensed to the Government, and in support and furtherance of its Government Subcontract obligations, the Institute, without disclosure prohibitions, with the rights in subparagraphs (d)(2) and (3) above. Any copyright license required in order to

perform work under this First-tier Subcontract is freely transferable to any successor-in-interest of the Subcontractor, a successor Subcontractor to operate JPL, or the Government

- (5) The computer software may be marked with any appropriate proprietary notice that is consistent with the rights in subparagraphs (d)(2), (3), and (4) above.
- (b) The Subcontractor warrants that it has the right to sell, license, or transfer the license for the software furnished to the customer under this Subcontract in accordance with the terms of this Subcontract.

EXPORT LICENSES

[CT, FP-NR&D, FP-R&D, CIS, T&MC, LH/T&M, FPC, CREI – 09/04] [NFS 1852.225-70 – 02/00 (ALT 1 – 02/00)]

- (1) The Subcontractor shall comply with all U.S. export control laws and regulations, including the International Traffic in Arms Regulations (ITAR), 22 CFR Parts 120 through 130, and the Export Administration Regulations (EAR), 15 CFR Parts 730 through 799, in the performance of this Subcontract. In the absence of available license exemptions/exceptions, the Subcontractor shall be responsible for obtaining the appropriate licenses or other approvals, if required, for exports of hardware, technical data, and software, or for the provision of technical assistance.
- (2) The Subcontractor shall be responsible for obtaining export licenses, if required, before utilizing foreign persons in the performance of this Subcontract, including instances where the work is to be performed on-site at JPL, where the foreign person will have access to export-controlled technical data or software.
- (3) The Subcontractor shall be responsible for all regulatory record keeping requirements associated with the use of licenses and license exemptions/exceptions.
- (4) The Subcontractor shall be responsible for ensuring that the provisions of this clause apply to its First-tier Subcontractors.
- (5) The Subcontractor may request, in writing, that the Subcontracting Officer authorize it to export ITAR-controlled technical data (including software) pursuant to the exemption at 22 CFR 125.4(b)(3). The Contracting Officer or designated representative may authorize or direct the use of the exemption where the data does not disclose details of the design, development, production, or manufacture of any defense article.

FACSIMILE COPIES ACCEPTABLE

[CT, FP-NR&D, FP-R&D, CIS, T&MC, LH/T&M, FPC, CREI, A – E, RSA – 09/04]

The parties agree that facsimile (fax) copies of Subcontract documents are just as binding as originally executed documents.

FINAL REPORT

[CT, FP-NR&D, FP-R&D, LH/T&M, CREI, RSA – 09/04] [NPG 2200.2A]

(This Article applies to Subcontracts requiring final, formal, published reports prepared for NASA funded or sponsored science technology, research and development, and space flight projects).

The Subcontractor's final published report shall (1) indicate that the work is funded by NASA, (2) be formatted in accordance with NPG 2200.2A, (3) be correctly marked to ensure appropriate dissemination, and (4) be forwarded to JPL.

FIRST-TIER SUBCONTRACTS

[CT, CREI – 09/04] [FAR 52.244-2 – 08/98]

JPL reserves the right to require submission of any First-tier Subcontract or purchase order, and related documentation, for advance consent; in such cases, JPL may, in its discretion, ratify in writing any First-tier Subcontract, and such ratification shall constitute consent.

The Subcontractor agrees that no First-tier Subcontract (including lower-tier First-tier Subcontracts) placed under this Subcontract shall provide for payment on a cost-plus-a-percentage-of-cost basis, and any fee payable under cost-reimbursement type First-tier Subcontracts shall not exceed the fee limitations in Part 15.404 of FAR and any corresponding implementing or supplementing provisions in the NFS, unless approved by JPL.

The Subcontractor shall give JPL immediate notice in writing of any action or suit filed and prompt notice of any claim made against the Subcontractor by any First-tier Subcontractor or supplier which, in the opinion of the Subcontractor, may result in litigation related in any way to this Subcontract with respect to which the Subcontractor may be entitled to reimbursement from JPL.

JPL may, in its discretion, specifically approve in writing any of the provisions of a purchase order or First-tier Subcontract. However, such approval or the consent of JPL obtained as required by this Article shall not be construed to constitute a determination (i) of the acceptability of any First-tier Subcontract terms and conditions; (ii) of the allowability of any cost under this Subcontract; or (iii) to relieve the Subcontractor of any responsibility for performing this Subcontract.

FIRST-TIER SUBCONTRACTS FOR COMMERCIAL ITEMS

[CT, FP-NR&D, FP-R&D, T&MC, LH/T&M, FPC, CREI, A - E - 09/04] [FAR 52.244-6 - 05/02]

Definition.

"Commercial item," as used in this Article, has the meaning contained in the "Definitions" Article and in FAR 52.202-1, "Definitions."

"First-tier Subcontract," as used in this Article, includes a transfer of commercial items between divisions, subsidiaries, or affiliates of the Subcontractor or First-tier Subcontractor at any tier.

- (c) To the maximum extent practicable, the Subcontractor shall incorporate, and require its First-tier Subcontractors at all tiers to incorporate, commercial items or nondevelopmental items as components of items to be supplied under this Subcontract.

(d)

The Subcontractor shall insert the following clauses in First-tier Subcontracts for commercial items:

52.219-8, Utilization of Small Business Concerns (Oct 200) (15 U.S.C. 637(d)(2)(3)), in all First-tier Subcontracts that offer further First-tier Subcontracting opportunities. If the First-tier Subcontract (except First-tier Subcontracts to small business concerns) exceed \$500,000 (\$1,000,000 for construction of any public facility), the First-tier Subcontractor must include 52.219-8 in lower tier subcontracts that offer First-tier Subcontracting opportunities.

52.222-26, Equal Opportunity (Apr 2002) (E.O. 11246).

52.222-35, Equal Opportunity for Special Disabled Veterans, Veterans of the Vietnam Era, and Other Eligible Veterans (Dec 2001) (38 U.S.C. 4212(a));

52.222-36, Affirmative Action for Workers with Disabilities (Jun 1998) (29 U.S.C. 793).

52.247-64, Preference for Privately Owned U.S.-Flag Commercial Vessels (APR 2003) (46 U.S.C. Appx 1241 and 10 U.S.C. 2631) (flow down required in accordance with paragraph (d) of FAR clause 52.247-64).

- (6) While not required, the Subcontractor may flow down to First-tier Subcontracts for commercial items a minimal number of additional clauses necessary to satisfy its contractual obligations.
- (e) The Subcontractor shall include the terms of this Article, including this paragraph (d), in First-tier Subcontracts awarded under this Subcontract.

GEOGRAPHIC PARTICIPATION IN THE AEROSPACE PROGRAM

[CT, FP-NR&D, FP-R&D, T&MC, LH/T&M, CREI - 09/04] [NFS 1852.244-70 - 04/85]

(This Article is applicable to Subcontracts and First-tier Subcontracts of \$100,000 or more. Work performed outside the United States is exempt from the requirements of this Article.)

Incorporate by reference NFS 1852.244-70, Geographic Participation in the Aerospace Program.

GOVERNMENT PROPERTY

[CREI - 09/04] [FAR 52.245-5, Alt. I - 06/03]

- (a) Government-Furnished Property (hereafter "GFP").

- (1) The term "Subcontractor's managerial personnel," as used in paragraph (g) of this Article, means any of the Subcontractor's directors, officers, managers, superintendents, or equivalent representatives who have supervision or direction of:
 - (1) All or substantially all of the Subcontractor's business;
 - (G) All or substantially all of the Subcontractor's operation at any one plant, or separate location at which the Subcontract is being performed; or
 - (H) A separate and complete major industrial operation connected with performing this Subcontract.
 - (2) JPL shall deliver to the Subcontractor, for use in connection with and under the terms of this Subcontract, the property, if any, which JPL has committed to provide in the Schedule or specifications, together with such related data and information as the Subcontractor may request and as may be reasonably required for the intended use of the property.
 - (3) The delivery or performance dates for this Subcontract are based upon the expectation that GFP suitable for use will be delivered to the Subcontractor at the times stated in the Schedule or, if not so stated, in sufficient time to enable the Subcontractor to meet the Subcontract's delivery or performance dates.
 - (4) If GFP is received by the Subcontractor in a condition not suitable for the intended use, the Subcontractor shall, upon receipt, notify JPL, detailing the facts, and, as directed by JPL and at JPL expense, either effect repairs or modification or return or otherwise dispose of the property. After completing the directed action and upon written request of the Subcontractor, JPL shall make an equitable adjustment as provided in paragraph (h) of this Article.
 - (5) If GFP is not delivered to the Subcontractor by the required time or times, JPL shall, upon the Subcontractor's timely written request, make a determination of the delay, if any, caused the Subcontractor and shall make an equitable adjustment in accordance with paragraph (h) of this Article.
- (b) Changes in GFP.
- (1) JPL may, by written notice, (i) decrease the GFP provided or to be provided under this Subcontract or (ii) substitute other GFP for the property to be provided by JPL or to be acquired by the Subcontractor for JPL under this Subcontract. The Subcontractor shall promptly take such action as JPL may direct regarding the removal, shipment, or disposal of the property covered by this notice.
 - (2) Upon the Subcontractor's written request, JPL shall make an equitable adjustment to the Subcontract in accordance with paragraph (h) of this Article, if JPL has agreed in the Schedule to make such property available for performing this Subcontract and there is any:
 - (A) Decrease or substitution in this property pursuant to subparagraph (b)(1) above; or
 - (B) Withdrawal of authority to use property, if provided under any other Subcontract or lease.
- (c) Title.
- (1) The Government shall retain title to all GFP.
 - (2) All GFP and all property acquired by the Subcontractor, title to which vests in the Government under this paragraph (collectively referred to as "Government property"), are subject to the provisions of this Article. Title to Government property shall not be affected by its incorporation into or attachment to any property not owned by the Government, nor shall Government property become a fixture or lose its identity as personal property by being attached to any real property.
 - (3) Title to all property purchased by the Subcontractor for which the Subcontractor is entitled to be reimbursed as a direct item of cost under this Subcontract and that, under the provisions of this Subcontract is to vest in the Government, shall pass to and vest in the Government upon the supplier's delivery of such property. Title to all other property, the cost of which is to be reimbursed to the Subcontractor under this Subcontract and that under the provisions of this Subcontract is to vest in the Government, shall pass to and vest in the Government upon:
 - (1) Issuance of the property for use in Subcontract performance;
 - (C) Commencement of processing of the property or its use in Subcontract performance; or

- (D) Reimbursement of the cost of the property by the Institute, whichever occurs first.
- (2) Title to equipment (and other tangible personal property) specifically approved by JPL in writing to be purchased with funds available for research and having an acquisition cost of \$5,000 or less shall vest in the Subcontractor, upon acquisition, provided JPL concurs in writing by issuance of the form specified below. Title to equipment purchased with funds available for research and having an acquisition cost in excess of \$5,000 shall vest with the Government, unless JPL (with NASA approval) indicates otherwise in writing by issuance of the form indicated below. If title to equipment vests in the Subcontractor under this subparagraph (c)(4), the Subcontractor agrees that no charge will be made to the Institute for any depreciation, amortization, or use under any existing or future JPL or Government Subcontract or First-tier Subcontract there under. In any case in which the equipment is a computer workstation consisting of a monitor and central processing unit, and for similar "systems" of equipment, "title" and the "acquisition cost" as used in this subparagraph shall be deemed to refer to the title and acquisition cost of the "system." The status of title to property and the required concurrences and approvals will be tracked using the form (JPL 2710) attached, which will be issued to the Subcontractor by the JPL Subcontracts Manager.
- (3) Vesting title under this paragraph (c) is subject to civil rights legislation, 42 U.S.C. 2000d. Before title is vested and by signing this Subcontract, the Subcontractor accepts and agrees to the following: "No person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under this contemplated financial assistance (title to equipment)."
- (d) Use of Government Property. The Government property shall be used only for performing this Subcontract, unless otherwise provided in this Subcontract or approved by JPL.
- (e) Property Administration.
- (1) The Subcontractor shall be responsible and accountable for all Government property provided under this Subcontract and shall comply with the applicable provisions of FAR 45.5, and any corresponding implementing or supplementing provisions in the NFS, as modified by the JPL document "Management of Government Property in the Possession of Subcontractors" (JPL 0968), a copy of which is attached to and made a part of this Subcontract.
- (2) The Subcontractor shall establish and maintain a program for the use, maintenance, repair, protection, and preservation of Government property in accordance with sound business practice and the applicable provisions of FAR 45.5 and any corresponding implementing or supplementing provisions in the NFS, as modified by JPL 0968.
- (3) If damage occurs to Government property, the risk of which has been assumed by JPL under this Subcontract, JPL shall replace the items or the Subcontractor shall make such repairs as JPL directs. However, if the Subcontractor cannot effect such repairs within the time required, the Subcontractor shall dispose of the property as directed by JPL. When any property for which JPL is responsible is replaced or repaired, JPL shall make an equitable adjustment in accordance with paragraph (h) of this Article.
- (f) Access. JPL or the Government and all its designees shall have access at all reasonable times to the premises in which any Government property is located for the purpose of inspecting the Government property.
- (g) Limited Risk of Loss.
- (a) The Subcontractor shall not be liable for loss or destruction of, or damage to, the Government property provided under this Subcontract or for expenses incidental to such loss, destruction, or damage, except as provided in subparagraphs (2) and (3) below.
- (b) The Subcontractor shall be responsible for loss or destruction of, or damage to, the Government property provided under this Subcontract (including expenses incidental to such loss, destruction, or damage):
- (1) That results from a risk expressly required to be insured under this Subcontract, but only to the extent of the insurance required to be purchased and maintained or to the extent of insurance actually purchased and maintained, whichever is greater;
- (E) That results from a risk that is in fact covered by insurance or for which the Subcontractor is otherwise reimbursed, but only to the extent of such insurance or reimbursement;
- (F) For which the Subcontractor is otherwise responsible under the express terms of this Subcontract;

- (G) That results from willful misconduct or lack of good faith on the part of the Subcontractor's managerial personnel; or
 - (H) That results from a failure on the part of the Subcontractor, due to willful misconduct or lack of good faith on the part of the Subcontractor's managerial personnel, to establish and administer a program or system for the control, use, protection, preservation, maintenance, and repair of Government property as required by paragraph (e) of this Article.
- (2)
- (1) If the Subcontractor fails to act as provided by subparagraph (g)(2)(E) above, after being notified (by certified mail addressed to one of the Subcontractor's managerial personnel) of the Government's disapproval, withdrawal of approval, or nonacceptance of the system or program, it shall be conclusively presumed that such failure was due to willful misconduct or lack of good faith on the part of the Subcontractor's managerial personnel.
 - (I) In such event, any loss or destruction of, or damage to, the Government property shall be presumed to have resulted from such failure unless the Subcontractor can establish by clear and convincing evidence that such loss, destruction, or damage:
 - (a) Did not result from the Subcontractor's failure to maintain an approved program or system; or
 - (b) Occurred while an approved program or system was maintained by the Subcontractor.
 - (2) If the Subcontractor transfers Government property to the possession and control of a First-tier Subcontractor, the transfer shall not affect the liability of the Subcontractor for loss or destruction of, or damage to, the property as set forth above. However, the Subcontractor shall require the First-tier Subcontractor to assume the risk of, and be responsible for, any loss or destruction of, or damage to, the property while in the First-tier Subcontractor's possession or control, except to the extent that the First-tier Subcontractor, with the advance approval of JPL, relieves the First-tier Subcontractor from such liability. In the absence of such approval, the First-tier Subcontractor shall contain appropriate provisions requiring the return of all Government property in as good condition as when received, except for reasonable wear and tear or for its use in accordance with the provisions of the Subcontract.
 - (3) Upon loss or destruction of, or damage to, Government property provided under this Subcontract, the Subcontractor shall so notify JPL and shall communicate with the loss and salvage organization, if any, designated by JPL. With the assistance of any such organization, the Subcontractor shall take all reasonable action to protect the Government property from further damage, separate the damaged and undamaged Government property, put all the affected Government property in the best possible order, and furnish to JPL a statement of:
 - (a) The lost, destroyed, or damaged Government property;
 - (J) The time and origin of the loss, destruction, or damage;
 - (K) All known interests in commingled property of which the Government property is a part; and
 - (L) The insurance, if any, covering any part of or interest in such commingled property.
 - (4) The Subcontractor shall repair, renovate, and take such other action with respect to damaged Government property as JPL directs. If the Government property is destroyed or damaged beyond practical repair, or is damaged and so commingled or combined with property of others (including the Subcontractor's) that separation is impractical, the Subcontractor may, with the approval of and subject to any conditions imposed by JPL, sell such property for the account of this Subcontract. Such sales may be made in order to minimize the loss to the Government, to permit the resumption of business, or to accomplish a similar purpose. The Subcontractor shall be entitled to an equitable adjustment in the Subcontract price for the expenditures made in performing the obligations under this subparagraph (g)(6) in accordance with paragraph (h) of this Article. However, the Government may directly reimburse the loss and salvage organization for any of their charges. JPL shall give due regard to the Subcontractor's liability under this paragraph (g) when making any such equitable adjustment.
 - (5) The Subcontractor shall not be reimbursed for, and shall not include as an item of overhead, the cost of insurance or of any reserve covering risk of loss or destruction of, or damage to, Government property,

except to the extent that the Institute may have expressly required the Subcontractor to carry such insurance under another provision of this Subcontract.

- (6) In the event the Subcontractor is reimbursed or otherwise compensated for any loss or destruction of, or damage to, Government property, the Subcontractor shall use the proceeds to repair, renovate, or replace the lost, destroyed, or damaged Government property or shall otherwise credit the proceeds to, or equitably reimburse, the Institute or the Government, as directed by JPL.
 - (7) The Subcontractor shall do nothing to prejudice the Institute's or the Government's rights to recover against third parties for any loss or destruction of, or damage to, Government property. Upon the request of JPL, the Subcontractor shall, at the Government's expense, furnish to the Government all reasonable assistance and cooperation (including the prosecution of suit and the execution of instruments of assignment in favor of the Government) in obtaining recovery. In addition, where a First-tier Subcontractor has not been relieved from liability for any loss or destruction of, or damage to, Government property, the Subcontractor shall enforce for the benefit of the Government the liability of the First-tier Subcontractor for such loss, destruction, or damage.
- (b) Equitable Adjustment. When this Article specifies an equitable adjustment, it shall be made to any affected Subcontract provision in accordance with the procedures of the "Changes" Article. When appropriate, JPL may initiate an equitable adjustment in favor of JPL. The right to an equitable adjustment shall be the Subcontractor's exclusive remedy. JPL shall not be liable to suit for breach of Subcontract for:
- (1) Any delay in delivery of GFP;
 - (2) Delivery of GFP in a condition not suitable for its intended use;
 - (3) A decrease in or substitution of GFP; or
 - (4) Failure to repair or replace Government property for which JPL is responsible.
- (c) Final Accounting and Disposition of Government Property. Upon completing this Subcontract, or at such earlier dates as may be fixed by JPL, the Subcontractor shall submit, in a form acceptable to JPL, inventory schedules covering all items of Government property not consumed in performing this Subcontract or delivered to JPL. The Subcontractor shall prepare for shipment, deliver f.o.b. origin, or dispose of the Government property as may be directed or authorized by JPL. The net proceeds of any such disposal shall be credited to the cost of the work covered by this Subcontract or paid in such manner as directed by JPL. The foregoing provisions shall apply to scrap from Government property; provided, however, that JPL may authorize or direct the Subcontractor to omit from such inventory schedules any scrap consisting of faulty castings or forgings or of cutting and processing waste, such as chips, cuttings, borings, turnings, short ends, circles, trimmings, clippings, and remnants, and to dispose of such scrap in accordance with the Subcontractor's normal practice and account for it as a part of general overhead or other reimbursable costs in accordance with the Subcontractor's established accounting procedures.
- (d) Abandonment and Restoration of Subcontractor Premises. Unless otherwise provided herein, the Government through JPL:
- (a) May abandon any Government property in place, at which time all obligations of the Government and of the Institute regarding such abandoned property shall cease; and
 - (b) Has no obligation to restore or rehabilitate the Subcontractor's premises under any circumstances (e.g., abandonment, disposition upon completion of need, or Subcontract completion). However, if the GFP (listed in the Schedule or specifications) is withdrawn or is unsuitable for the intended use, or if other Government property is substituted, then the equitable adjustment under paragraph (h) of this Article may properly include restoration or rehabilitation costs.
 - (c) Communications. All communications under this Article shall be in writing.
 - (d) Overseas Subcontracts. If this Subcontract is to be performed outside the United States and its outlying areas, the words "Government" and "Government-furnished" (when they appear in this Article) shall be construed as "United States Government" and "United States Government-furnished," respectively.

HAZARDOUS MATERIAL IDENTIFICATION AND MATERIAL SAFETY DATA

[CT, FP-NR&D, FP-R&D, CIS, T&MC, LH/T&M, FPC, CREI – 09/04] [FAR 52.223-3 – 01/97, Alt. I – 07/95]

(This Article applies if any materials are to be supplied which are defined as hazardous under the latest version of Federal Standard No. 313 [including revisions adopted during the term of the Subcontract].)

Incorporate FAR 52.223-3 [Jan 97, Alt. I, Jul 95] with JPL Subcontracts Manager in lieu of Contracting Officer and adding JPL with the Government in all respects including safety and rights to data.)

INJURY AND ILLNESS PREVENTION PROGRAM

[CT, FP-NR&D, FP-R&D, T&MC, LH/T&M, FPC, CREI, A - E - 09/04]

All Subcontractors whose personnel work at a site in California must establish and implement an effective injury and illness prevention program in compliance with California law.

INSPECTION OF RESEARCH AND DEVELOPMENT

[CREI] [FAR 52.246-9 - 04/84]

JPL and the Government have the right to inspect and evaluate the work performed or being performed under the Subcontract, and the premises where the work is being performed, at all reasonable times and in a manner that will not unduly delay the work. If JPL or the Government performs inspection or evaluation on the premises of the Subcontractor or a First-tier Subcontractor, the Subcontractor shall furnish and shall require First-tier Subcontractors to furnish all reasonable facilities and assistance for the safe and convenient performance of these duties.

INSURANCE - LIABILITY TO THIRD PERSONS

[CREI - 4/9909/04 09/04] [FAR 52.228-7 - 03/96]

(a) Except as provided in subparagraph (1) immediately following, or in paragraph (h) of this Article if applicable, the Subcontractor shall procure and thereafter maintain the following insurance with respect to performance under this Subcontract:

- (1) Workers' Compensation and Employer's Liability Insurance, as required by applicable Federal and state workers' compensation and occupational disease statutes. If occupational diseases are not compensable under those statutes, they shall be covered under the Employer's Liability section of the insurance policy, except when Subcontract operations are so commingled with the Subcontractor's commercial operations that it would not be practical. The Employer's Liability coverage shall be at least \$100,000, except in states with exclusive or monopolistic funds that do not permit worker's compensation to be written by private carriers. However, the Subcontractor in fulfillment of its obligation to provide Workers' Compensation Insurance may maintain a self-insurance program if the Subcontractor is qualified pursuant to statutory authority to do so.
- (2) Comprehensive Liability Insurance, including automobiles (owned, non-owned and leased), completed operations, products, and contractual Liability Insurance specifically covering all liability assumed under this Subcontract. Such insurance shall be written for a combined single limit of not less than \$1,000,000 for all deaths, injuries, and property damage arising from one accident or occurrence.
- (3) Such other insurance as JPL may from time to time require.

The Subcontractor agrees to furnish certificates of insurance to JPL for the coverage required hereunder, should JPL so request.

- (b) The Subcontractor agrees to submit for approval of JPL, to the extent and in the manner required by JPL, any other insurance that is maintained by the Subcontractor in connection with the performance of this Subcontract and for which the Subcontractor seeks reimbursement.
- (c) Except as provided in paragraph (h) of this Article if applicable, the Subcontractor shall be reimbursed:
 - (1) For that portion (i) of the reasonable cost of insurance allocable to this Subcontract and (ii) required or approved under this Article; and
 - (2) For certain liabilities (and expenses incidental to such liabilities) to third persons not compensated by insurance or otherwise. These liabilities must arise out of the performance of this Subcontract, whether or not caused by the negligence of the Subcontractor or of the Subcontractor's agents, servants, or employees, and must be represented by final judgments or settlements approved in writing by the Institute. These liabilities are for (i) loss of or damage to property (other than property owned, occupied, or used by the Subcontractor, rented to the Subcontractor, or in the care, custody, or control of the Subcontractor); or (ii) death or bodily injury.
- (d) The Institute's liability under paragraph (c)(2) of this Article is subject to the availability of funds under the Prime Subcontract at the time a contingency occurs.

- (e) The Subcontractor shall not be reimbursed for liabilities (and expenses incidental to such liabilities):
 - (a) For which the Subcontractor is otherwise responsible under the express terms of any Article or Articles specified in the Schedule or elsewhere of the Subcontract;
 - (b) For which the Subcontractor has failed to insure or to maintain insurance as required; or
 - (c) That result from willful misconduct or lack of good faith on the part of any of the Subcontractor's directors, officers, managers, superintendents, or other representatives who have supervision or direction of:
 - (A) All or substantially all of the Subcontractor's business;
 - (B) All or substantially all of the Subcontractor's operations at any one plant or separate location in which this Subcontract is being performed; or
 - (C) A separate and complete major operation in connection with the performance of this Subcontract.
- (d) The provisions of paragraph (e) of this Article shall not restrict the right of the Subcontractor to be reimbursed for the cost of insurance maintained by the Subcontractor in connection with the performance of this Subcontract, other than insurance required in accordance with this Article; provided, that such cost is allowable under the "Allowable Cost and Payment" Article of this Subcontract.
- (e) If any suit or action is filed or any claim is made against the Subcontractor, the cost and expense of which may be reimbursable to the Subcontractor under this Subcontract, and the risk of which is then uninsured or is insured for less than the amount claimed, the Subcontractor shall:
 - (a) Immediately notify JPL and promptly furnish copies of all pertinent papers received;
 - (b) Authorize Institute or Government representatives to collaborate with counsel for the insurance carrier in settling or defending the claim when the amount of the liability claimed exceeds the amount of coverage; and
 - (c) Authorize Institute or Government representatives to settle or defend the claim and to represent the Subcontractor in or to take charge of any litigation, if required by the Institute, when the liability is not insured or covered by bond. The Subcontractor may, at its own expense, be associated with the Institute or the Government representatives in any such claim or litigation.
- (d) If the Subcontractor is partially immune from tort liability as a State Agency or as a charitable institution and notwithstanding paragraphs (a) and (e) of this Article:
 - (1) The Institute does not assume any liability to third persons, nor will the Institute reimburse the Subcontractor for its liability to third persons, with respect to loss due to death, bodily injury, or damage to property resulting in any way from the performance of this Subcontract or any First-tier Subcontract under this Subcontract.
 - (2) The Subcontractor need not provide or maintain insurance coverage as required by paragraph (a) of this Article; provided, that the Subcontractor may obtain any insurance coverage deemed necessary, subject to approval by JPL as to form, amount, and duration. The Subcontractor shall be reimbursed for the cost of such insurance and, to the extent provided in paragraphs (c) and (d) of this Article, for liabilities to third persons for which the Subcontractor has obtained insurance coverage as provided in this subparagraph (h)(2), but for which such coverage is insufficient in amount.

INTEGRITY OF UNIT PRICES

[CT, FP-NR&D, FP-R&D, T&MC, LH/T&M, CREI – 09/04] [FAR 52.215-14 – 10/97]

(This Article is applicable if the initial Subcontract price exceeds \$100,000, unless the Subcontract is for services where supplies are not required, construction or architect-engineer services, utility services, commercial items, or petroleum products.)

- (1) Any proposal submitted for the negotiation of prices for items of supplies shall distribute costs within Subcontracts on a basis that ensures that unit prices are in proportion to the items' base cost (e.g., manufacturing or acquisition costs). Any method of distributing costs to line items that distorts unit prices shall not be used. For example, distributing costs equally among line items is not acceptable except when there is little or no variation in base cost. Nothing in this paragraph requires submission of cost or pricing data not otherwise required by law or regulation.

- (2) The Subcontractor shall insert the substance of this Article in all First-tier Subcontracts meeting the applicability prescription above.

LIMITATION OF COST

[CREI – 09/04] [FAR 52.232-20 – 04/84]

- (1) The parties estimate that the total cost for performance of this Subcontract will not cost the Institute more than (i) the estimated cost specified in the Schedule, or, (ii) if this is a cost-sharing Subcontract, the Institute's share of the estimated cost specified in the Schedule. The Subcontractor agrees to use its best efforts to perform the work specified in the Schedule and all obligations under this Subcontract within the estimated cost, which, if this is a cost-sharing Subcontract, includes both the Institute's and the Subcontractor's share of the cost.
- (2) The Subcontractor shall notify JPL in writing whenever it has reason to believe that:
- (a) The costs the Subcontractor expects to incur under this Subcontract in the next 60 days, when added to all costs previously incurred, will exceed 75% of the estimated cost specified in the Schedule; or
- (b) The total cost for the performance of this Subcontract will be either greater or substantially less than had been previously estimated.
- (c) As part of the notification, the Subcontractor shall provide JPL a revised estimate of the total cost of performing this Subcontract.
- (d) Except as required by other provisions of this Subcontract, specifically citing and stated to be an exception to this Article:
- (1) The Institute is not obligated to reimburse the Subcontractor for costs incurred in excess of (i) the estimated cost specified in the Schedule or, (ii) if this is a cost-sharing Subcontract, the estimated cost to the Institute specified in the Schedule; and
- (2) The Subcontractor is not obligated to continue performance under this Subcontract (including actions under the "Termination for Convenience" Article of this Subcontract) or otherwise incur costs in excess of the estimated cost specified in the Schedule, until JPL (i) notifies the Subcontractor in writing that the estimated cost has been increased and (ii) provides a revised estimated total cost of performing this Subcontract. If this is a cost-sharing Subcontract, the increase shall be allocated in accordance with the formula specified in the Schedule.
- (e) No notice, communication, or representation in any form other than that specified in subparagraph (d)(2) above, or from any person other than a duly authorized representative of JPL shall affect the estimated cost of this Subcontract. In the absence of the specified notice, the Institute is not obligated to reimburse the Subcontractor for any costs in excess of the estimated cost, or if this is a cost-sharing Subcontract, for any costs in excess of the estimated cost to the Institute specified in the Schedule, whether those excess costs were incurred during the course of the Subcontract or as a result of termination.
- (f) If the estimated cost specified in the Schedule is increased, any costs the Subcontractor incurs before the increase that are in excess of the previously estimated cost shall be allowable to the same extent as if incurred afterward, unless JPL issues a termination or other notice directing that the increase is solely to cover termination or other specified expenses.
- (g) Directions, orders, notices, requests and the like issued by JPL pursuant to the "Changes" Article or any other provision of this Subcontract shall not be considered an authorization to exceed the estimated cost specified in the Schedule, in the absence of a statement in a Unilateral Modification or other Subcontract Modification increasing the estimated cost.

LIMITATION OF FUNDS

[CREI – 09/04] [FAR 52.232-22 – 04/84]

(This Article shall be applicable and the Article of this Subcontract entitled "Limitation of Cost" inapplicable until such time as an amount equal to the total estimated cost and fee, if any, set forth in the Schedule is allotted to this Subcontract and thereafter the Article of this Subcontract entitled "Limitation of Cost" shall be applicable and this

Article inapplicable, unless and until the amount allotted to this Subcontract once again becomes less than the total estimated cost and fee, if any, set forth in the Schedule.)

- (1) The parties estimate that performance of this Subcontract will not cost the Institute more than (i) the estimated cost specified in the Schedule or, (ii) if this is a cost-sharing Subcontract, the Institute's share of the estimated cost specified in the Schedule. The Subcontractor agrees to use its best efforts to perform the work specified in the Schedule and all obligations under this Subcontract within the estimated cost, which, if this is a cost-sharing Subcontract, includes both the Institute's and the Subcontractor's share of the cost.
- (2) The Schedule specifies the amount presently available for payment by the Institute and allotted to this Subcontract, or the Institute's share of the cost if this is a cost-sharing Subcontract. The parties contemplate that the Institute will allot additional funds incrementally to the Subcontract up to the full estimated cost to the Institute specified in the Schedule. The Subcontractor agrees to perform, or have performed, work on the Subcontract up to the point at which the total amount paid and payable by the Institute under the Subcontract approximates but does not exceed the total amount actually allotted by the Institute to the Subcontract.
- (3) The Subcontractor shall notify JPL in writing whenever it has reason to believe that the costs which it expects to incur in the performance of this Subcontract in the next succeeding 60 days, when added to (i) all costs previously incurred; (ii) the amount of termination costs that would be payable by the Institute in the event of termination of this Subcontract for the convenience of the Institute; and (iii) any fee paid or payable up through such period; will (i) exceed the total amount so far allotted to the Subcontract by the Institute, or (ii) if this is a cost-sharing Subcontract, the amount then allotted to the Subcontract by the Institute plus the Subcontractor's corresponding share.
- (4) If, after notification, additional funds are not allotted in sufficient time to enable the Subcontractor to continue performance of this Subcontract in a timely manner, the Institute will, upon written request by the Subcontractor, terminate this Subcontract pursuant to the provisions of the "Termination for Convenience" Article.
- (5) Except as required by other provisions of this Subcontract, specifically citing and stated to be an exception to this Article:
 - (1) The Institute is not obligated to reimburse the Subcontractor for costs incurred in excess of the total amount allotted by the Institute to this Subcontract; and
 - (2) The Subcontractor is not obligated to continue performance under this Subcontract (including actions under the "Termination for Convenience" Article of this Subcontract) or otherwise incur costs in excess of (i) the amount then allotted to the Subcontract by the Institute or, (ii) if this is a cost-sharing Subcontract, the amount then allotted by the Institute to the Subcontract plus the Subcontractor's corresponding share, until JPL notifies the Subcontractor in writing that the amount allotted by the Institute has been increased and specifies an increased amount, which shall then constitute the total amount allotted by the Institute to this Subcontract.
- (h) The estimated cost shall be increased to the extent that (i) the amount allotted by the Institute or, (ii) if this is a cost-sharing Subcontract, the amount then allotted by the Institute to the Subcontract plus the Subcontractor's corresponding share, exceeds the estimated cost specified in the Schedule. If this is a cost-sharing Subcontract, the increase shall be allocated in accordance with the formula specified in the Schedule.
- (i) No notice, communication, or representation in any form other than that specified in subparagraph (e)(2) above, or from any person other than a duly authorized representative of JPL, shall affect the amount allotted by the Institute to this Subcontract. In the absence of the specified notice, the Institute is not obligated to reimburse the Subcontractor for any costs in excess of the total amount allotted by the Institute to this Subcontract, whether incurred during the course of the Subcontract or as a result of termination.
- (j) When and to the extent that the amount allotted by the Institute to the Subcontract is increased, any costs the Subcontractor incurs before the increase that are in excess of (i) the amount previously allotted by the Institute, or (ii) if this is a cost-sharing Subcontract, the amount previously allotted by the Institute plus the Subcontractor's corresponding share, shall be allowable to the same extent as if incurred afterward, unless JPL issues a termination or other notice and directs that the increase is solely to cover termination or other specified expenses.

- (k) Change orders shall not be considered an authorization to exceed the amount allotted by the Institute specified in the Schedule, unless they contain a statement increasing the amount allotted.
- (l) Nothing in this Article shall affect the right of JPL to terminate this Subcontract. If this Subcontract is terminated, JPL and the Subcontractor shall negotiate an equitable distribution of all property produced or purchased under the Subcontract, based upon the share of costs incurred by each.

LIMITATION OF LIABILITY

[CT, FP-NR&D, FP-R&D, T&MC, LH/T&M, CREI – 09/04] [FAR 52.246-23, 52.246-24, and 52.246-25 – 02/97]

This Article includes 3 Parts: Part 2, Limitation of Liability – High Value Items, applies to all items delivered under this Subcontract to JPL which have a unit cost exceeding \$100,000; Part 1, Limitation of Liability, applies to all other items delivered under this Subcontract. Part 3, Limitation of Liability – Services, applies if the Subcontract is over \$100,000 and requires the performance of services.

PART 1: LIMITATION OF LIABILITY

(Applies to all items delivered under this Subcontract other than High Value Items)

- (1) Except as provided in paragraphs (b) and (c) below, and except for remedies expressly provided elsewhere in this Subcontract, the Subcontractor shall not be liable for loss of or damage to property of the Government (excluding the supplies delivered under this Subcontract) that (i) occurs after acceptance of the supplies delivered under this Subcontract and (ii) results from any defects or deficiencies in the supplies.
- (2) The limitation of liability under paragraph (a) above shall not apply when a defect or deficiency in, or the acceptance of, the supplies results from willful misconduct or lack of good faith on the part of any of the Subcontractor's managerial personnel. The term "Subcontractor's managerial personnel," as used in this Article, means the Subcontractor's directors, officers, and any of the Subcontractor's managers, superintendents, or equivalent representatives who have supervision or direction of:
 - (A) All or substantially all of the Subcontractor's business;
 - (B) All or substantially all of the Subcontractor's operations at any one plant, laboratory, or separate location at which the Subcontract is being performed; or
 - (C) A separate and complete major industrial operation connected with the performance of this Subcontract.
- (m) If the Subcontractor carries insurance, or has established a reserve for self-insurance, covering liability for loss or damage suffered by the Institute or the Government through purchase or use of the supplies required to be delivered under this Subcontract, the Subcontractor shall be liable to the Institute and the Government, to the extent of such insurance or reserve, for loss of or damage to property of the Institute and the Government occurring after acceptance of, and resulting from any defects or deficiencies in, the supplies delivered under this Subcontract.
- (n) The Subcontractor shall include this Article, including this paragraph (d), supplemented as necessary to reflect the relationship of the Subcontracting parties, in all First-tier Subcontracts.

PART 2: LIMITATION OF LIABILITY – HIGH VALUE ITEMS

(Applies to all items delivered under this Subcontract to JPL which have a unit cost exceeding \$100,000)

- (A) Except as provided in paragraphs (b) through (e) below, and notwithstanding any other provision of this Subcontract, the Subcontractor shall not be liable for loss of or damage to property of the Institute or the Government (including the supplies delivered under this Subcontract) that:
 - (1) Occurs after JPL acceptance of the supplies delivered under this Subcontract; and
 - (2) Results from any defects or deficiencies in the supplies.
- (o) The limitation of liability under paragraph (a) above shall not apply when a defect or deficiency in, or JPL's acceptance of, the supplies results from willful misconduct or lack of good faith on the part of any of the Subcontractor's managerial personnel. The term "Subcontractor's managerial personnel," as used in this Article,

means the Subcontractor's directors, officers and any of the Subcontractor's managers, superintendents, or equivalent representatives who have supervision or direction of:

- (1) All or substantially all of the Subcontractor's business;
 - (2) All or substantially all of the Subcontractor's operations at any one plant, laboratory, or separate location at which the Subcontract is being performed; or
 - (3) A separate and complete major industrial operation connected with the performance of this Subcontract.
- (p) If the Subcontractor carries insurance, or has established a reserve for self-insurance, covering liability for loss or damage suffered by the Institute or the Government through purchase or use of the supplies required to be delivered under this Subcontract, the Subcontractor shall be liable to the Institute and the Government, to the extent of such insurance or reserve, for loss of or damage to property of the Government occurring after JPL acceptance of, and resulting from any defects or deficiencies in, the supplies delivered under this Subcontract.
- (q)
- (1) This Article does not diminish the Subcontractor's obligations, to the extent that they arise otherwise under this Subcontract, relating to correction, repair, replacement, or other relief for any defect or deficiency in supplies delivered under this Subcontract.
 - (2) Unless this is a cost-reimbursement Subcontract, if loss or damage occurs and correction, repair, or replacement is not feasible or desired by JPL, the Subcontractor shall, as determined by JPL:
- (a) Pay the Institute the amount it would have cost the Subcontractor to make correction, repair, or replacement before the loss or damage occurred; or
- (B) Provide other equitable relief.
- (b) This Article shall not limit or otherwise affect the Institute's or the Government's rights under Articles, if included in this Subcontract, that cover:
- (1) Warranty of technical data;
 - (2) Ground and flight risks or aircraft flight risks; or
 - (3) Government property.
- (c) In each First-tier Subcontract, except a First-tier Subcontract covered by paragraph (g) below, the Subcontractor shall insert the appropriate Article, supplemented as necessary to reflect the relationship of the Subcontracting parties, as follows:
- (A) In First-tier Subcontracts for high-value items only, after obtaining JPL's advance written approval, insert this Article, including this paragraph (f).
 - (B) In First-tier Subcontracts for other end items only, insert the clause at FAR subsection 52.246-23, Limitation of Liability.
- (d) In any First-tier Subcontract for both high-value items for which this Article is appropriate, and other end items for which the clause at FAR subsection 52.246-23, and any corresponding implementing or supplementing provisions in the NFS, is appropriate, after obtaining the JPL's advance written approval to use this Article, the Subcontractor shall:
- (1) Include both this Article and the FAR clause;
 - (2) Identify high-value items by line item; and
 - (3) Insert the following preamble before paragraph (a) of this Article as used in that First-tier Subcontract:
- "(This Article shall apply only to those items identified in this Subcontract as being subject to this Article.)"

PART 3: LIMITATION OF LIABILITY – SERVICES

(Applies if the Subcontract is over \$100,000 and requires the performance of services)

- (a) (a) Except as provided in paragraphs (b) and (c) below, and except to the extent that the Subcontractor is expressly responsible under this Subcontract for deficiencies in the services required to be performed under it (including any materials furnished in conjunction with those services), the Subcontractor shall not be liable for loss of or damage to property of the Institute or the Government that:
 - (a) Occurs after Institute acceptance of services performed under this Subcontract; and
 - (b) Results from any defects or deficiencies in the services performed or materials furnished.
- (c) The limitation of liability under paragraph (a) above shall not apply when a defect or deficiency in, or the Institute acceptance of, services performed or materials furnished results from willful misconduct or lack of good faith on the part of any of the Subcontractor's managerial personnel. The term "Subcontractor's managerial personnel," as used in this provision, means the Subcontractor's directors, officers, and any of the Subcontractor's managers, superintendents, or equivalent representatives who have supervision or direction of:
 - (a) All or substantially all of the Subcontractor's business;
 - (b) All or substantially all of the Subcontractor's operations at any one plant, laboratory, or separate location at which the Subcontract is being performed; or
 - (4) A separate and complete major industrial operation connected with the performance of this Subcontract.
- (c) If the Subcontractor carries insurance, or has established a reserve for self-insurance, covering liability for loss or damage suffered by the Institute or the Government through the Subcontractor's performance of services or furnishing of materials under this Subcontract, the Subcontractor shall be liable to the Institute or the Government, to the extent of such insurance or reserve, for loss of or damage to property of the Institute or the Government occurring after Institute acceptance of, and resulting from any defects and deficiencies in, services performed or materials furnished under this Subcontract.
- (d) The Subcontractor shall include this provision, including this paragraph (d), supplemented as necessary to reflect the relationship of the Subcontracting parties, in all First-tier Subcontracts over \$25,000.

LIMITATION ON PAYMENTS TO INFLUENCE CERTAIN FEDERAL TRANSACTIONS

[CT, FP-NR&D, FP-R&D, T&MC, LH/T&M, FPC, CREI, A – E, RSA – 09/04] [FAR 52.203-12 – 06/97]

(This Article applies if this Subcontract is expected to exceed \$100,000.)

Incorporate by reference FAR 52.203-12, Limitation on Payments to Influence Certain Federal Transactions (June 1997).

LIMITATION ON WITHHOLDING OF PAYMENTS

[CT, LHT&M, T&MC, CREI – 09/04] [FAR 52.232-9 – 04/84]

If more than one Article of this Subcontract authorizes the temporary withholding of amounts otherwise payable to the Subcontractor for supplies delivered or services performed, the total of the amounts withheld at any one time shall not exceed the greatest amount that may be withheld under any one Article at that time; provided, that this limitation shall not apply to:

- (1) Withholdings pursuant to any Article relating to wages or hours of employees;
- (e) Withholdings not specifically provided for by this Subcontract; and
- (f) The recovery of overpayments.

MATERIAL REQUIREMENTS

[CT, FP-NR&D, FP-R&D, T&MC, LH/T&M, FPC, CREI – 09/04] [FAR 52.211-5 – 08/00]

(A) Definitions (As used in this Article).

- (1) New means composed of previously unused components, whether manufactured from virgin material, recovered material in the form of raw material, or materials and by-products generated from, and reused within, an original manufacturing process; provided that the supplies meet Subcontract requirements, including but not limited to, performance, reliability, and life expectancy.
 - (2) Reconditioned means restored to the original normal operating condition by readjustments and material replacement.
 - (3) Recovered material means waste materials and by-products that have been recovered or diverted from solid waste, but the term does not include those materials and by-products generated from, and commonly reused within, an original manufacturing process.
 - (4) Remanufactured means factory rebuilt to original specifications.
 - (5) Virgin material means previously unused raw material, including previously unused copper, aluminum, lead, zinc, iron, other metal or metal ore, or any undeveloped resource that is, or with new technology will become, a source of raw materials.
- (g) Unless this Subcontract otherwise requires virgin material or supplies composed of or manufactured from virgin material, the Subcontractor shall provide supplies that are new, reconditioned, or remanufactured, as defined in this Article.
- (h) A proposal to provide unused former Government surplus property shall include a complete description of the material, the quantity, the name of the Government agency from which acquired, and the date of acquisition.
- (i) A proposal to provide used, reconditioned, or remanufactured supplies shall include a detailed description of such supplies and shall be submitted to JPL for approval.
- (j) Used, reconditioned, or remanufactured supplies, or unused former Government surplus property, may be used in Subcontract performance if the Subcontractor has proposed the use of such supplies, and JPL has authorized their use.

NOTICE AND ASSISTANCE REGARDING PATENT AND COPYRIGHT INFRINGEMENT

[CT, FP-NR&D, FP-R&D, T&MC, LH/T&M, FPC, CREI, A – E, RSA – 09/04] [FAR 52.227-2 – 08/96]

(The provisions of this Article shall be applicable only if the amount of this Subcontract is expected to exceed \$100,000, except when complete performance and delivery are outside the United States, its possessions, and Puerto Rico, unless ultimate delivery is into those areas.)

- (a) The Subcontractor shall report to the Contracting Officer and JPL, promptly and in reasonable written detail, each notice or claim of patent or copyright infringement based on the performance of this Subcontract of which the Subcontractor has knowledge.
- (b) In the event of any claim or suit against the Government on account of any alleged patent or copyright infringement arising out of the performance of this Subcontract or out of the use of any supplies furnished or work or services performed under this Subcontract, the Subcontractor shall furnish to the Government, when requested by the Contracting Officer, all evidence and information in possession of the Subcontractor pertaining to such suit or claim. Such evidence and information shall be furnished at the expense of the Government except where the Subcontractor has agreed to indemnify the Government.
- (c) The Subcontractor agrees to include, and require inclusion of, this Article in all First-tier Subcontracts at any tier for supplies or services (including construction and architect-engineer First-tier Subcontracts and those for material, supplies, models, samples, or design or testing services) expected to exceed \$100,000.

NOTICE OF RADIOACTIVE MATERIALS

[CT, FP-NR&D, FP-R&D, CIS, T&MC, LH/T&M, FPC, CREI – 09/04] [FAR 52.223-7 – 01/97]

(This Article is applicable only if this Subcontract is for radioactive materials as defined in this provision.)

Incorporate FAR 52.223-7 (January 1997) inserting 30 days in paragraph (a), with JPL Subcontracts Manager in lieu of Contracting Officer, and adding JPL with the Government in all respects.

NOTIFICATION OF OWNERSHIP CHANGES

[CT, FP-NR&D, FP-R&D, T&MC, LH/T&M, FPC, A - E CREI- 09/04] [FAR 52.215-19 – 10/97]

(This Article is applicable if it is contemplated that cost or pricing data or for which any preaward or postaward cost determination will be subject to Subpart 31.2)

- (a) The Subcontractor shall make the following notifications in writing:
 - (a) (1) When the Subcontractor becomes aware that a change in its ownership has occurred, or is certain to occur, that could result in changes in the valuation of its capitalized assets in the accounting records, the Subcontractor shall notify JPL (ACO) within 30 days.
- (b) The Subcontractor shall also notify JPL within 30 days whenever changes to asset valuations or any other cost changes have occurred or are certain to occur as a result of a change in ownership.
- (c) The Subcontractor shall:
 - (a) Maintain current, accurate, and complete inventory records of assets and their costs;
 - (b) Provide JPL ready access to the records upon request;
 - (c) Ensure that all individual and grouped assets, their capitalized values, accumulated depreciation or amortization, and remaining useful lives are identified accurately before and after each of the Subcontractor's ownership changes; and
 - (d) Retain and continue to maintain depreciation and amortization schedules based on the asset records maintained before each Subcontractor ownership change.
- (e) The Subcontractor shall include the substance of this clause in all First-tier Subcontracts under this Subcontract that meet the applicability requirement of FAR 15.408(k).

NOTICE TO JPL OF LABOR DISPUTES

[CT, FP-NR&D, FP-R&D, T&MC, LH/T&M, FPC, CREI, A - E – 09/04] [FAR 52.222-1 – 02/97]

- (1) If the Contractor has knowledge that any actual or potential labor dispute is delaying or threatens to delay the timely performance of this Subcontract, the Subcontractor shall immediately give notice to JPL. The initial notice shall include the following:
 - (1) Identification of parts/materials, etc., which are or may be affected;
 - (2) Brief description of work-around plans to avoid delivery or performance delays. If the actual or potential dispute involves a lower-tier First-tier Subcontractor, advise as to potential alternate sources;
 - (3) Other Government agencies having responsibility for any functions concerning the affected operation, e.g., quality control, agency resident representative, etc., and the title, name and telephone of the agency representative.
 - (4) Other Government agencies which have been notified of the situation, and if available, the title, name and telephone number of any representative of another agency who is involved with the actual or threatened labor dispute;
 - (5) Specific information regarding transportation of parts/materials or personnel which is or may be affected;
 - (6) Manufacturer/First-tier Subcontractor and union data to include:
 - (A) Name, address and telephone numbers of the manufacturer/First-tier Subcontractor representative and Industrial Relations Representative to be contacted for further information;
 - (B) Union's name and local lodge number, if known.
 - (C) If any of the required information is not available when providing the initial notice, indicate when it is estimated that such information can be provided.

- (f) The Subcontractor agrees to insert the substance of this Article, including this paragraph (b), in any First-tier Subcontract to which a labor dispute may delay the timely performance of this Subcontract; except that each such First-tier Subcontract shall provide that, in the event its timely performance is delayed or threatened by delay by any actual or potential labor dispute, the First-tier Subcontractor shall immediately notify the next higher-tier subcontractor or JPL, as the case may be, concerning the dispute.

ORDER OF PRECEDENCE

[CT, FP-NR&D, FP-R&D, T&MC, LH/T&M, FPC, CREI, A – E, RSA – 09/04] [FAR 52.215-8 – 10/97]

- (A) The rights and obligations of the parties of this Subcontract shall be subject to and governed by the Schedule, the General Provisions (the term "General Provisions" includes any "Additional General Provisions"), and any proposals, specifications or other documents or provisions which are made a part of this Subcontract by reference or otherwise.
- (B) To the extent of any inconsistency between (i) the Schedule, other than the Alterations Article, (ii) the Alterations Article in the Schedule, and (iii) the GPs, the inconsistency will be resolved in the following order of priority:
- (1) The Alterations Article.
 - (2) The GPs not altered.
 - (3) The Schedule, other than the Alterations Article.
- (g) To the extent of any inconsistency between
- (A) The Schedule, other than any proposals, specifications or other documents or provisions which are made a part of this Subcontract by reference or otherwise, in the Schedule, and
- (B) Any proposals, specifications or other documents or provisions which are made a part of this Subcontract by reference or otherwise in the Schedule,
- (4) (c)(1) has order of precedence over (c)(2).
- (h) All provisions of this Subcontract that are required by their terms to be included in First-tier Subcontracts shall be required by the Subcontractor to take precedence in the First-tier Subcontract over any other provisions.

PATENT RIGHTS - RETENTION BY THE SUBCONTRACTOR (SHORT FORM)

[CREI, RSA – 8/01 09/04] [FAR 52.227-11 – 06/97; NFS 1852.227-11 – 06/97]

- (A) Definitions.
- (1) "Invention" means any invention or discovery which is or may be patentable or otherwise protectible under Title 35 of the United States Code (U.S.C.) or any novel variety of plant which is or may be protected under the Plant Variety Protection Act (7 U.S.C. 2321 et seq.).
 - (2) "Made" when used in relation to any invention means the conception or first actual reduction to practice of such invention.
 - (3) "Nonprofit Organization" means a university or other institution of higher education or an organization of the type described in section 501(c)(3) of the Internal Revenue Code of 1954 (26 U.S.C. 501(c)) and exempt from taxation under section 501(a) of the Internal Revenue Code (26 U.S.C. 501(a)) or any nonprofit scientific or educational organization qualified under a state nonprofit organization statute.
 - (4) "Practical Application" means to manufacture in the case of a composition of product, to practice, in the case of a process or method, or to operate, in the case of a machine or system; and, in each case, under such conditions as to establish that the invention is being utilized and that its benefits are, to the extent permitted by law or Government regulations, available to the public on reasonable terms.
 - (5) "Small Business Firm" means a small business concern as defined at Section 2 of Pub. L. 85-536 (15 U.S.C. 632) and implementing regulations of the Administrator of the Small Business Administration. For the purpose of this Article, the size standard for small business concerns involved in Government procurement and First-tier Subcontracting, at 13 CFR 121.3-8 and 13 CFR 121.3-12, respectively, will be used.

- (6) "Subject Invention" means any invention of the Subcontractor conceived or first actually reduced to practice in the performance of work under this Subcontract, provided that in the case of a variety of plant, the date of determination (as defined in section 41(d) of the Plant Variety Protection Act, 7 U.S.C. 2401(d)) must also occur during the period of Subcontract performance.
- (7) "Contracting Officer" has the meaning set forth under the "Definitions" Article. The Contracting Officer has designated the Patent Counsel and the Technology Utilization Officer, NASA Management Office, 4800 Oak Grove Drive, Pasadena, California 91109, as the representatives for the administration of the "Patent Rights" Article of this Subcontract. All correspondence pertaining thereto shall be addressed to the Technology Utilization Officer unless transmitted in response to correspondence from the Patent Counsel. See (f) (5) (A) and (B) below regarding the requirement to send copies of transmittal letters to the JPL Office of Patents and New Technology and to the cognizant JPL Subcontracts Manager.
- (i) Allocation of Principal Rights. The Subcontractor may retain the entire right, title, and interest throughout the world to each subject invention subject to the provisions of this Article and 35 U.S.C. 203. With respect to any subject invention in which the Subcontractor retains title, the Federal Government shall have a nonexclusive, nontransferable, irrevocable, paid-up license to practice or have practiced for or on behalf of the United States the subject invention throughout the world.
- (j) Invention Disclosure, Election of Title and Filing of Patent Application by Subcontractor.
 - (1) The Subcontractor will disclose each subject invention to the Contracting Officer within two months after the inventor discloses it in writing to Subcontractor personnel responsible for patent matters. The disclosure to the Contracting Officer shall be in the form of a written report and shall identify the Subcontract under which the invention was made and the inventor(s). It shall be sufficiently complete in technical detail to convey a clear understanding to the extent known at the time of the disclosure, of the nature, purpose, operation, and the physical, chemical, biological, or electrical characteristics of the invention. The disclosure shall also identify any publication, on sale or public use of the invention and whether a manuscript describing the invention has been submitted for publication and, if so, whether it has been accepted for publication at the time of disclosure. In addition, after disclosure to the Contracting Officer, the Subcontractor will promptly notify the Contracting Officer of the acceptance of any manuscript describing the invention for publication or of any on sale or public use planned by the Subcontractor.
 - (2) The Subcontractor will elect in writing whether or not to retain title to any such invention by notifying NASA within two years of disclosure to NASA. However, in any case where publication, on sale or public use has initiated the one year statutory period wherein valid patent protection can still be obtained in the United States, the period for election of title may be shortened by the Contracting Officer to a date that is no more than 60 days prior to the end of the statutory period.
 - (3) The Subcontractor will file its initial patent application on a subject invention to which it elects to retain title within one year after election of title or, if earlier, prior to the end of any statutory period wherein valid patent protection can be obtained in the United States after a publication, on sale, or public use. The Subcontractor will file patent applications in additional countries or international patent offices within either 10 months of the corresponding initial patent application or six months from the date permission is granted by the Commissioner of Patents and Trademarks to file foreign patent applications where such filing has been prohibited by a Secrecy Order.
 - (4) Requests for extension of the time for disclosure election, and filing under subparagraphs (c)(1), (2), and (3) of this Article, may, at the discretion of the Contracting Officer, be granted.
 - (5) The Subcontractor may use whatever format is convenient to disclose subject inventions required in subparagraph (c)(1). NASA prefers that the Subcontractor use either the electronic or paper version of NASA Form 1679, Disclosure of Invention, and New Technology (Including Software) to disclose subject inventions. Both the electronic and paper versions of NASA Form 1679 may be accessed at the electronic New Technology Reporting Web site <http://invention.nasa.gov>.
- (k) Conditions When the Government May Obtain Title. The Subcontractor will convey to NASA, upon written request, title to any subject invention:
 - (A) If the Subcontractor fails to disclose or elect title to the subject invention within the times specified in paragraph (c) above, or elects not to retain title; provided that NASA may only request title within 60 days after learning of the Subcontractor's failure to disclose or elect within the specified times;

- (B) In those countries in which the Subcontractor fails to file patent applications within the times specified in paragraph (c) of this Article; provided, however, that if the Subcontractor has filed a patent application in a country after the time specified in paragraph (c) of this Article but prior to its receipt of the written request of the Contracting Officer, the Subcontractor shall continue to retain title in that country;
 - (C) In any country in which the Subcontractor decides not to continue the prosecution of any application for, to pay the maintenance fees on, or defend in re-examination or opposition proceeding on, a patent on a subject invention.
- (l) Minimum Rights to Subcontractor and Protection of the Subcontractor Right to File.
- (1) The Subcontractor will retain a nonexclusive, royalty-free license throughout the world in each subject invention to which the Government obtains title, except if the Subcontractor fails to disclose the invention within the times specified in paragraph (c) of this Article. The Subcontractor's license extends to its domestic subsidiaries and affiliates, if any, within the corporate structure of which the Subcontractor is a party and includes the right to grant sublicenses of the same scope to the extent the Subcontractor was legally obligated to do so at the time the Subcontract was awarded. The license is transferable only with the approval of NASA except when transferred to the successor of that part of the Subcontractor's business to which the invention pertains.
 - (2) The Subcontractor's domestic license may be revoked or modified by NASA (the funding Federal agency) to the extent necessary to achieve expeditious practical application of the subject invention pursuant to an application for an exclusive license submitted in accordance with applicable provisions at 37 CFR Part 404 and NASA licensing regulations (if any). This license will not be revoked in that field of use or the geographical areas in which the Subcontractor has achieved practical application and continues to make the benefits of the invention reasonably accessible to the public. The license in any foreign country may be revoked or modified at the discretion of NASA (the funding Federal agency) to the extent the Subcontractor, its licensees, or its domestic subsidiaries or affiliates have failed to achieve practical application in that foreign country.
 - (3) Before revocation or modification of the license, NASA (the funding Federal agency) will furnish the Subcontractor a written notice of its intention to revoke or modify the license, and the Subcontractor will be allowed 30 days (or such other time as may be authorized by NASA for good cause shown by the Subcontractor) after the notice to show cause why the license should not be revoked or modified. The Subcontractor has the right to appeal, in accordance with applicable regulations in 37 CFR Part 404 and NASA regulations (if any) concerning the licensing of Government-owned inventions, any decision concerning the revocation or modification of the license.
- (m) Subcontractor Action to Protect the Government's Interest.
- (A) The Subcontractor agrees to execute or to have executed and promptly deliver to the Contracting Officer all instruments necessary to:
 - (A) Establish or confirm the rights the Government has throughout the world in those subject inventions to which the Subcontractor elects to retain title; and
 - (B) Convey title to NASA when requested under paragraph (d) of this Article and to enable the Government to obtain patent protection throughout the world in that subject invention.
 - (4) The Subcontractor agrees to require, by written agreement, its employees, other than clerical and nontechnical employees, to disclose promptly in writing to personnel identified as responsible for the administration of patent matters and in a format suggested by the Subcontractor each subject invention made under Subcontract in order that the Subcontractor can comply with the disclosure provisions of paragraph (c) of this Article, and to execute all papers necessary to file patent applications on subject inventions and to establish the Government's rights in the subject inventions. This disclosure format should require, as a minimum, the information required by subparagraph (c)(1) of this Article. The Subcontractor shall instruct such employees, through employee agreements or suitable educational programs, on the importance of reporting inventions in sufficient time to permit the filing of patent applications prior to United States or foreign statutory bars.
 - (5) The Subcontractor will notify the Contracting Officer of any decisions not to continue the prosecution of a patent application, pay maintenance fees, or defend in a re-examination or opposition proceeding on a

patent, in any country, not less than 30 days before the expiration of the response period required by the relevant patent office.

- (6) The Subcontractor agrees to include, within the specification of any United States patent application and any patent issuing thereon covering a subject invention, the following statement: "This invention was made with Government support under a Prime Contract between the Institute and NASA and JPL First-tier Subcontract no. [Note: Insert number of this JPL Contract] The Government has certain rights in the invention."
- (7) The Subcontractor shall provide the Contracting Officer (A) through (D) below. Copies of transmittal letters for (A) and (B) below shall be sent to the JPL Office of Patents and New Technology (OPANT) and to the cognizant JPL Subcontracts Manager.
 - (1) A listing every 12 months (or such longer period as the Contracting Officer may specify) from the date of the Subcontract, of all subject inventions required to be disclosed during the period.
 - (C) A final report prior to closeout of the Subcontract listing all subject inventions or certifying that there were none.
 - (D) Upon request, the filing date, serial number, and title, a copy of the patent application, and patent number and issue date for any subject invention in any country in which the Subcontractor has applied for patents.
 - (E) An irrevocable power to inspect and make copies of the patent application file, by the Government, when a Federal Government employee is a co-inventor.
- (n) First-tier Subcontracts.
 - (a) The Subcontractor will include this Article, suitably modified to identify the parties, in all First-tier Subcontracts, regardless of tier, for experimental, developmental, or research work to be performed by a small business firm or domestic nonprofit organization. The First-tier Subcontractor will retain all rights provided for the Subcontractor in this Article, and the Subcontractor will not, as part of the consideration for awarding the First-tier Subcontract, obtain rights in the First-tier Subcontractor's subject inventions.
 - (b) The Subcontractor shall include the clause in the NASA FAR Supplement at 18-52.227-70, New Technology, suitably modified to identify the parties, in all First-tier Subcontracts, regardless of tier, for experimental, developmental, research, design, or engineering work to be performed by other than a small business firm or nonprofit organization.
 - (c) In the case of First-tier Subcontracts, at any tier, NASA, the First-tier Subcontractor, and the Subcontractor agree that the mutual obligations of the parties created by this Article constitute a Subcontract between the First-tier Subcontractor and NASA with respect to the matters covered by this Article; provided, however, that nothing in this paragraph is intended to confer any jurisdiction under the Contract Disputes Act in connection with proceedings under paragraph (j) of this Article.
 - (d) Reporting on Utilization of Subject Inventions. The Subcontractor agrees to submit, on request, periodic reports no more frequently than annually on the utilization of a subject invention or on efforts at obtaining such utilization that are being made by the Subcontractor or its licensees or assignees. Such reports shall include information regarding the status of development, date of first commercial sale or use, gross royalties received by the Subcontractor, and such other data and information as NASA may reasonably specify. The Subcontractor also agrees to provide additional reports as may be requested by NASA in connection with any march-in proceeding undertaken by NASA in accordance with paragraph (j) of this Article. As required by 35 U.S.C. 202(c)(5), NASA agrees it will not disclose such information to persons outside of the Institute and the Government without permission of the Subcontractor.
 - (e) Preference for United States Industry. Notwithstanding any other provision of this Article, the Subcontractor agrees that neither it nor any assignee will grant to any person the exclusive right to use or sell any subject invention in the United States unless such person agrees that any product embodying the subject invention or produced through the use of the subject invention will be manufactured substantially in the United States. However, in individual cases, the requirement for such an agreement may be waived by NASA upon a showing by the Subcontractor or its assignee that reasonable but unsuccessful efforts have been made to grant licenses on similar terms to potential licensees that would be likely to manufacture substantially in the United States or that under the circumstances domestic manufacture is not commercially feasible.

- (f) **March-in Rights.** The Subcontractor agrees that, with respect to any subject invention in which it has acquired title, NASA has the right in accordance with the procedures in 37 CFR 401.6 and any supplemental regulations of NASA to require the Subcontractor, an assignee or exclusive licensee of a subject invention to grant a nonexclusive, partially exclusive, or exclusive license in any field of use to a responsible applicant or applicants, upon terms that are reasonable under the circumstances, and if the Subcontractor, assignee, or exclusive licensee refuses such a request, NASA has the right to grant such a license itself if NASA determines that:
- (1) Such action is necessary because the Subcontractor or assignee has not taken, or is not expected to take within a reasonable time, effective steps to achieve practical application of the subject invention in such field of use;
 - (2) Such action is necessary to alleviate health or safety needs which are not reasonably satisfied by the Subcontractor, assignee, or their licensees;
 - (3) Such action is necessary to meet requirements for public use specified by Federal regulations and such requirements are not reasonably satisfied by the Subcontractor, assignee, or licensees; or
 - (4) Such action is necessary because the agreement required by paragraph (i) of this Article has not been obtained or waived or because a licensee of the exclusive right to use or sell any subject invention in the United States is in breach of such agreement.
- (g) **Special Provisions for Subcontracts with Nonprofit Organizations.** If the Subcontractor is a nonprofit organization, it agrees that:
- (A) Rights to a subject invention in the United States may not be assigned without the approval of NASA, except where such assignment is made to an organization which has as one of its primary functions the management of inventions; provided, that such assignee will be subject to the same provisions as the Subcontractor;
 - (B) The Subcontractor will share royalties collected on a subject invention with the inventor, including Federal employee co-inventors (when NASA deems it appropriate) when the subject invention is assigned in accordance with 35 U.S.C. 202(e) and 37 CFR 401.10;
 - (C) The balance of any royalties or income earned by the Subcontractor with respect to subject inventions, after payment of expenses (including payments to inventors) incidental to the administration of subject inventions, will be utilized for the support of scientific research or education; and
 - (D) It will make efforts that are reasonable under the circumstances to attract licensees of subject inventions that are small business firms, and that it will give a preference to a small business firm when licensing a subject invention if the Subcontractor determines that the small business firm has a plan or proposal for marketing the invention which, if executed, is equally as likely to bring the invention to practical application as any plans or proposals from applicants that are not small business firms; provided that the Subcontractor is also satisfied that the small business firm has the capability and resources to carry out its plan or proposal. The decision whether to give a preference in any specific case will be at the discretion of the Subcontractor. However, the Subcontractor agrees that the Secretary of Commerce may review the Subcontractor's licensing program and decisions regarding small business applicants, and the Subcontractor will negotiate changes to its licensing policies, procedures, or practices with the Secretary of Commerce when the Secretary's review discloses that the Subcontractor could take reasonable steps to more effectively implement the requirements of this subparagraph (k)(4).
- (h) **Communications.** The NASA central point of contact for communications or matters relating to this Article is the Contracting Officer.

PAYMENT FOR OVERTIME PREMIUMS

[CT, CREI – 09/04] [FAR 52.222-2 – 07/90]

- (a) Allowable cost shall not include any amount on account of overtime premiums, except to the extent that they either:
- (1) Are approved in writing by JPL; or
 - (2) Are paid for work:

- (a) Necessary to cope with emergencies such as those resulting from accidents, natural disasters, breakdowns of production equipment, or occasional production bottlenecks of a sporadic nature;
 - (E) By indirect-labor employees such as those performing duties in connection with administration, protection, transportation, maintenance, standby plant protection, operation of utilities, or accounting;
 - (F) To perform tests, industrial processes, laboratory procedures, loading or unloading of transportation conveyances, and operations in flight or afloat that are continuous in nature and cannot reasonably be interrupted or completed otherwise; or
 - (G) That will result in lower overall costs to the Institute.
 - (H) For pre-launch activities and mission performance or delivery related events of an urgent nature.
- (b) The cost of overtime premiums otherwise allowable under (a) above shall be allowed only to the extent the amount thereof is reasonable and properly allocable to the work under this Subcontract.
- (c) Any request for estimated overtime premiums submitted for approval pursuant to (a) (1) above shall include all estimated overtime for Subcontract completion and shall:
 - (1) Identify the work unit, e.g., department or section in which the requested overtime will be used, together with present workload, staffing, and other data of the affected unit sufficient to permit JPL to evaluate the necessity for the overtime;
 - (2) Demonstrate the effect that denial of the request will have on Subcontract delivery or performance schedule;
 - (3) Identify the extent to which approval of overtime would affect the performance or cost in connection with other JPL Subcontracts, together with identification of each affected Subcontract; and
 - (4) Provide reasons why the required work cannot be performed by using multi-shift operations or by employing additional personnel.

PENSION ADJUSTMENTS AND ASSET REVERSIONS

[CT, CREI – 09/04] [FAR 52.215-15 – 12/98]

- (A) This Article is applicable if it is anticipated that certified cost or pricing data is required or if any preaward or post-award cost determinations will be subject to FAR Part 31.
- (B) The Subcontractor shall promptly notify the Contracting Officer in writing when it determines that it will terminate a defined-benefit pension plan or otherwise recapture such pension fund assets.
- (C) For segment closings, pension plan terminations, or curtailment of benefits, the adjustment amount shall be the amount measured, assigned, and allocated in accordance with 48 CFR 9904.413-50(c)(12) for Subcontracts and First-tier Subcontracts that are subject to Cost Accounting Standards (CAS) Board rules and regulations (48 CFR Chapter 99). For Subcontracts and First-tier Subcontracts that are not subject to CAS, the adjustment amount shall be the amount measured, assigned, and allocated in accordance with 48 CFR 9904.413-50(c)(12), except the numerator of the fraction at 48 CFR 9904.413-50(c)(12)(vi) shall be the sum of the pension plan costs allocated to all non-CAS-covered Subcontracts and First-tier Subcontracts that are subject to Federal Acquisition Regulation (FAR) Subpart 31.2 or for which cost or pricing data were submitted.
- (D) For all other situations where assets revert to the Subcontractor, or such assets are constructively received by it for any reason, the Subcontractor shall, at the Government's option, make a refund or give a credit to the Government for its equitable share of the gross amount withdrawn. The Government's equitable share shall reflect the Government's participation in pension costs through those Subcontracts for which cost or pricing data were submitted or that are subject to FAR Subpart 31.2.
- (E) The Subcontractor shall include the substance of this clause in all First-tier Subcontracts under this Subcontract that meet the applicability requirement of FAR 15.408(g).

PREDETERMINED OR FIXED INDIRECT COST RATES – CREI

[CREI – 09/04] [FAR 52.216-15 – 04/98]

- (i) Notwithstanding the Allowable Cost and Payment General Provision of this Subcontract, the allowable indirect costs under this Subcontract shall be obtained by applying predetermined or fixed indirect cost rates to bases agreed upon by the parties, as specified below.
- (ii) Allowability of costs and acceptability of cost allocation methods shall be determined in accordance with FAR Subpart 31.3 in effect on the date of this Subcontract.
- (iii) Predetermined or fixed rate agreements in effect on the date of this Subcontract shall be incorporated into the Subcontract Schedule, consistent with FAR Subpart 31.3.
- (iv) If the Subcontract is established without any predetermined or fixed indirect cost rates the Subcontractor shall be reimbursed either at provisional rates or at billing rates acceptable to JPL, subject to appropriate adjustment when the final rates for that period are established.
- (v) If for any fiscal year (or other period specified in the Schedule) the Government and the Subcontractor fail to agree to predetermined or fixed indirect cost rates, the allowable indirect costs shall be obtained by applying final indirect cost rates established in accordance with the Allowable Cost and Payment General Provision.
- (vi) Allowable indirect costs for the period from the beginning of performance until the end of the Subcontractor's fiscal year (or other period specified in the Schedule) shall be obtained using the predetermined or fixed indirect cost rates and the bases shown in the Schedule.

PREFERENCE FOR PRIVATELY OWNED U.S.-FLAG COMMERCIAL VESSELS

[CT, CIS, FP-NR&D, FP-R&D, T&MC, LH/T&M, FPC, CREI – 09/04] [FAR 52.247-64 – 06/00]

- (1) (a) Except as provided in paragraph (b) below, the Subcontractor shall use privately owned U.S.-flag commercial vessels, and no others, in the ocean transportation of any supplies to be furnished under this Subcontract.
- (2) (b) If such vessels are not available for timely shipment at rates that are fair and reasonable for privately owned U.S.-flag commercial vessels, the Subcontractor shall notify JPL and request (i) authorization to ship in foreign-flag vessels or (ii) designation of available U.S.-flag vessels. If the Subcontractor is authorized in writing by JPL to ship the supplies in foreign-flag vessels, the Subcontract price shall be equitably adjusted to reflect the difference in costs of shipping the supplies in privately owned U.S.-flag commercial vessels and in foreign-flag vessels.
- (3)
 - (A) The Subcontractor shall submit one legible copy of a rated on-board ocean bill of lading for each shipment to both (i) the Contracting Officer and (ii) the Office of Cargo Preference, Maritime Administration (MAR-590) 400 Seventh Street, SW, Washington, D.C. 20590. Subcontractor and First-tier Subcontractor bills of lading shall be submitted through JPL.
 - (B) The Subcontractor shall furnish these bill of lading copies (i) within 20 working days of the date of loading for shipments originating in the United States or (ii) within 30 working days for shipments originating outside the United States. Each bill of lading copy shall contain the following information:
- (1) NASA shown as the sponsoring U.S. Government agency.
 - (C) Name of vessel.
 - (D) Vessel flag of registry.
 - (E) Date of loading.
 - (F) Port of loading.
 - (G) Port of final discharge.
 - (H) Description of commodity.
 - (I) Gross weight in pounds and cubic feet, if available.
 - (J) Total ocean freight revenue in U.S. dollars.

- (d) The Subcontractor shall insert the substance of this Article, including this paragraph (d), in all First-tier Subcontracts or purchase orders under this Subcontract.
- (e) The requirement in paragraph (a) does not apply to:
 - (a) Cargoes carried in vessels of the Panama Canal Commission or as required or authorized by law or treaty;
 - (b) Ocean transportation between foreign countries of supplies purchased with foreign currencies made available, or derived from funds that are made available, under the Foreign Assistance Act of 1961 (22 U.S.C. 2353);
 - (c) Shipments of classified supplies when the classification prohibits the use of non-Government vessels; and
 - (d) Guidance regarding fair and reasonable rates for privately owned U.S.-flag commercial vessels may be obtained from the Office of Costs and Rates, Maritime Administration, 400 Seventh Street, SW, Washington, DC 20590, Phone: 202-366-4610.

PREFERENCE FOR U.S.-FLAG AIR CARRIERS

[CT, FP-NR&D, FP-R&D, T&MC, LH/T&M, FPC, CREI, A - E - 09/04] [FAR 52.247-63 - 01/97]

(This Article does not apply to Subcontracts or First-tier Subcontracts for supplies, nonpersonal services, and construction that do not exceed \$100,000. This Article is not applicable to the acquisition of commercial items or commercial components.)

Incorporate by reference FAR 52.247-63, Preference for U.S.-Flag Air Carriers.

PRINTING AND DUPLICATING

[CT, FP-NR&D, FP-R&D, LH/T&M, T&MC, CREI, A - E - 09/04] [NFS 1852.208-81 - 10/01]

(This Article does not apply unless this Subcontract requires the Subcontractor to provide printing or significant reproduction, i.e., in excess of 5,000 copies of a single page or in excess of 25,000 copies in the aggregate of multiple pages.)

- (a) NFS 1852.208-81, Restrictions on Printing and Duplicating (October 2001), is hereby incorporated into this Article in its entirety.

Note 1: The terms "documentation" referred to in paragraph (a), "printing" referred to in paragraph (b), and "production units" referred to in paragraph (c) of NFS 1852.208-81, Restrictions on Printing and Duplicating (October 2001), pertain solely to "Government publications." "Government publications" is defined as (i) reports intended primarily for internal use by the Government and (ii) reports or other materials of the type that the Government itself distributes to the public under an agency program. "Government publications" shall, unless subject to exemption under applicable regulations, be printed by or through the Government Printing Office, even though the distribution of these reports and materials may be effectuated by the Subcontractor for the Government.

Examples of documents which are "Government publications" include, but are not limited to: (i) publications released by the Subcontractor or a First-tier Subcontractor to the public for the purpose of promoting NASA or a Government agency sponsor; (ii) deliverable final reports, but not interim drafts of such reports; (iii) deliverable review board presentations and conclusions in which a majority of the review board membership consists of Government representatives.

Examples of documents which are not "Government publications" include, but are not limited to: (i) publications for internal usage and communication by JPL or any Subcontractor or a First-tier Subcontractor such as JPL's or a Subcontractor's Telephone Directory or JPL's or a Subcontractor's internal newsletter; (ii) public information, education and public service documents, and award certificates printed for JPL's or a Subcontractor's usage rather than Government usage, including those which may contain an incidental reference to sponsorship by NASA or another Government agency; (iii) publications for which the printing costs are not paid for by the Government; (iv) non-deliverable reports provided to the Government for informational purposes which are suitable for publication in academic, technical, or professional journals and similar publications; and (v) review board presentations and conclusions in which a majority of the formal review board membership consists of JPL, Subcontractor, or First-tier Subcontractor representatives, where Government attendance is only incidental, and the Subcontract does not expressly require Government approval of the proceedings.

- (b) To the extent that it applies to First-tier Subcontractors, the Subcontractor will implement NASA Policy Guideline (NPG) 1490.5A, Procedural Guidance for Printing, Duplicating, and Copying Management, for all printing, duplicating, copying, forms, and mail management related to the performance of this Subcontract.

Note 2: Requests for waivers to permit commercial printers to print "Government publications" in cases of exigencies or other appropriate circumstances shall be submitted by the Subcontractor to the JPL Subcontracts Manager for submission to the NASA Printing Management Officer through the Contracting Officer.

PROHIBITION OF SUBCONTRACTOR USE OF PRIVATELY OWNED AIRCRAFT IN SUBCONTRACT PERFORMANCE

[CT, FPNR&D, FPR&D, T&MC, LH/T&M, FPC, CREI, A – E, RSA – 09/04]

The Subcontractor, its employees, agents and First-tier Subcontractors, shall not use privately owned (noncommercial) aircraft in the performance of this Subcontract without prior approval of JPL. Any request for approval to use privately owned aircraft must include a certificate of insurance as evidence that the Subcontractor has in effect Aircraft Liability Insurance coverage of not less than \$5,000,000 for all deaths, injuries, and property damage arising from one accident or occurrence. The Subcontractor shall be required as a condition of JPL's approval to submit an endorsement naming the Institute as an additional insured in such aircraft liability insurance policy. The Subcontractor shall include this provision in any First-tier Subcontract involving travel subject to JPL approval or requiring that the First-tier Subcontractor utilize a privately owned (noncommercial) aircraft.

PROHIBITION OF SEGREGATED FACILITIES

[CT, FP_NR&D, CIS, T&MC, LH/T&M, FPC, CREI, A - E – 09/04] [FAR 52.222-21]

(The following Article is applicable to Subcontracts where FAR 52.222-26, Equal Opportunity is applicable)

Incorporate by reference FAR 52.222-21, Prohibition of Segregated Facilities

RELEASE OF INFORMATION

[CT, FP-NR&D, FP-R&D, T&MC, LH/T&M, FPC, CREI, A - E – 09/04]

(This Article does not apply if the Article entitled "Release of Information - Preliminary Engineering Report (PER)" is applicable.)

- (a) The Subcontractor agrees that all information released by the Subcontractor for publicity or promotional purposes (e.g., news and photo releases, exhibit copy, motion picture scripts, and advertising copy) directly related to the Subcontractor's work with and for JPL will be submitted to JPL for review for technical accuracy prior to issuance. (See enclosed form letter JPL 1737, "Release of Information.")
- (b) The Subcontractor agrees to insert this clause including this paragraph in all First-tier Subcontracts.

REQUIRED NOTICES

[CT, FP-NR&D, FP-R&D, T&MC, LH/T&M, FPC, CREI, RSA – 09/04]

Unless otherwise specified in this Subcontract, any notice which the Subcontractor is required to provide to JPL under any provision of this Subcontract shall be directed to the JPL Subcontracts Manager or the Manager, Acquisition Division, JPL, or their authorized representatives.

RESTRICTIONS ON CERTAIN FOREIGN PURCHASES

[CT, FP-NR&D, FP-R&D, T&MC, LH/T&M, FPC, CREI, A - E – 09/04] [FAR 52.225-13 – 07/00]

Incorporate by reference FAR 52.225-13, Restrictions on Certain Foreign Purchases.

RESTRICTIONS ON FIRST-TIER SUBCONTRACTOR SALES

[CT, FP-NR&D, FP-R&D, T&MC, LH/T&M, CREI – 09/04] [FAR 3.503, 52.203-6 – 07/95]

(This Article is applicable to Subcontracts and First-tier Subcontracts exceeding \$100,000 for other than commercial items.)

Incorporate by reference FAR 52.203-6, Restrictions on Subcontractor Sales.

REVERSION OR ADJUSTMENT OF PLANS FOR POSTRETIREMENT BENEFITS OTHER THAN PENSIONS (PRB)

[CT, CREI – 09/04] [FAR 52.215-18 –10/97]

- (a) This Article is applicable if certified cost or pricing data is required or if any preaward or post-award cost determinations will be subject to FAR Part 31.

- (b) The Subcontractor shall promptly notify the JPL Subcontracts Manager in writing when it determines that it will terminate or reduce a PRB plan. If PRB fund assets revert, or inure, to the Subcontractor or are constructively received by it under a plan termination or otherwise, the Subcontractor shall make a refund or give a credit to the Institute for its equitable share as required by FAR 31.205-6(o)(6). The Subcontractor shall include the substance of this Article in all First-tier Subcontracts under this Subcontract that meet the applicability requirements of FAR 15.408(j)).

RIGHTS IN DATA – GENERAL

[CREI – 09/04] [FAR 52.227-14 – 06/87; NFS 1852.227-14 – 06/87]

(If the Article entitled "Existing Commercial Computer Software - Licensing" is applicable to this Subcontract, it shall apply in lieu of this Article regarding any acquisition of commercial computer software.)

(1) Definitions.

- (1) "Computer software," as used in this Article, means computer programs, computer data bases, and documentation thereof.
- (2) "Data," as used in this Article, means recorded information, regardless of form or the media on which it may be recorded. The term includes technical data, and computer software. The term does not include information incidental to Subcontract administration, such as financial, administrative, cost, or pricing, or management information.
- (3) "Form, fit, and function data," as used in this Article, means data relating to items, components, or processes that are sufficient to enable physical and functional interchangeability, as well as data identifying source, size, configuration, mating, and attachment characteristics, functional characteristics, and performance requirements; except that for computer software it means data identifying source, functional characteristics, and performance requirements but specifically excludes the source code, algorithm, process, formulae, and flow charts of the software.
- (4) "Institute" means the California Institute of Technology as a party to this Subcontract.
- (5) "JPL" means the Jet Propulsion Laboratory as the organizational element of the Institute having responsibility for administration of this Subcontract. JPL's rights under this Subcontract are rights of the California Institute of Technology as a party to this Subcontract.
- (6) "Limited rights," as used in this Article, means the rights of the Government, or in support and furtherance of its Government Subcontract obligations, the Institute, in limited rights data as set forth in the Limited Rights Notice of subparagraph (g)(2) if included in this Article.
- (7) "Limited rights data," as used in this Article, means data (other than computer software) that embody trade secrets or are commercial or financial and confidential or privileged, to the extent that such data pertain to items, components, or processes developed at private expense, including minor modifications thereof.
- (8) "Restricted computer software," as used in this Article, means computer software developed at private expense and that is a trade secret; is commercial or financial and is confidential or privileged; or is published copyrighted computer software; including minor modifications of such computer software.
- (9) "Restricted rights," as used in this Article, means the rights of the Government, and in support and in furtherance of its Government Subcontract obligations, the Institute, in restricted computer software, as set forth in a Restricted Rights Notice of subparagraph (g)(3) if included in this Article, or as otherwise may be provided in a collateral agreement incorporated in and made part of this Subcontract, including minor modifications of such computer software.
- (10) "Technical data," as used in this Article, means data (other than computer software) that are of a scientific or technical nature.
- (11) "Unlimited rights," as used in this Article, means the right of the Government, or in support and furtherance of its Government Subcontract obligations, the Institute, to use, disclose, reproduce, prepare derivative works, distribute copies to the public, and perform publicly and display publicly, in any manner and for any purpose, and to have or permit others to do so.

(c) Allocation of Rights.

- (i) Except as provided in paragraph (c) of this Article regarding copyright, the Government and in support and furtherance of its Government Subcontract obligations, the Institute, shall have unlimited rights in:
 - (a) Data first produced in the performance of this Subcontract;
 - (K) Form, fit, and function data delivered under this Subcontract;
 - (L) Data delivered under this Subcontract (except for restricted computer software) that constitute manuals or instructional and training material for installation, operation, or routine maintenance and repair of items, components, or processes delivered or furnished for use under this Subcontract; and
 - (M) All other data delivered under this Subcontract unless provided otherwise for limited rights data or restricted computer software in accordance with paragraph (g) of this Article.
- (12) The Subcontractor shall have the right to:
 - (1) Use, release to others, reproduce, distribute, or publish any data first produced or specifically used by the Subcontractor in the performance of this Subcontract, unless provided otherwise in paragraph (d) of this Article;
 - (N) Protect from unauthorized disclosure and use those data which are limited rights data or restricted computer software to the extent provided in paragraph (g) of this Article;
 - (O) Substantiate use of, add or correct limited rights, restricted rights, or copyright notices and to take other appropriate action, in accordance with paragraphs (e) and (f) of this Article; and
 - (P) Establish claim to copyright subsisting in data first produced in the performance of this Subcontract to the extent provided in subparagraph (c)(1) of this Article.
- (b) Copyright.
 - (1) Data First Produced in the Performance of This Subcontract.
 - (a) Except as otherwise specifically provided in this Subcontract, the Subcontractor may establish claim to copyright subsisting in any data first produced in the performance of this Subcontract.
 - (Q) When claim to copyright is made, the Subcontractor shall affix the applicable copyright notices of 17 U.S.C. 401 or 402 and acknowledgment of Government sponsorship (including the Prime Contract number) to the data when such data are delivered to JPL, as well as when the data are published or deposited for registration as a published work in the U.S. Copyright Office. (Acknowledgment shall include a statement that "This work was performed for the Jet Propulsion Laboratory, California Institute of Technology, sponsored by the United States Government under a Prime Contract between the California Institute of Technology and NASA.")
 - (R) For data other than computer software, the Subcontractor grants to the Government, and in support and furtherance of its Government Subcontract obligations, the Institute, any successor-in-interest of the Institute, or a successor Subcontractor to operate JPL, and others acting on their behalf, a paid-up, nonexclusive, irrevocable worldwide license in such copyrighted data to reproduce, prepare derivative works, distribute copies to the public, and perform publicly and display publicly by or on behalf of the Government.
 - (S) For computer software, the Subcontractor grants to the Government, and in support and furtherance of its Government Subcontract obligations, the Institute, any successor-in-interest of the Institute, or a successor Subcontractor to operate JPL, and others acting on their behalf, a paid-up, nonexclusive, irrevocable worldwide license in such copyrighted computer software to reproduce, prepare derivative works, and perform publicly and display publicly by or on behalf of the Government.
 - (2) Data Not First Produced in the Performance of This Subcontract. The Subcontractor shall not, without prior written permission of JPL, incorporate in data delivered under this Subcontract any data not first produced in the performance of this Subcontract and which contains the copyright notice of 17 U.S.C. 401 or 402, unless the Subcontractor identifies such data and grants to the Government, and in support and furtherance of its Government Subcontract obligations, the Institute, or acquires on their behalf, a license of the same scope as set forth in subparagraph (c)(1) of this Article; provided, however, that if such data are computer software, the Subcontractor grants to the Government and in support and furtherance of its Government Subcontract

obligations, the Institute, or acquires on their behalf, a paid-up nonexclusive irrevocable worldwide license as set forth in subparagraph (g)(3) of this Article if included in this Subcontract or as otherwise may be provided in a collateral agreement incorporated in or made part of this Subcontract.

- (3) Removal of Copyright Notices. JPL agrees not to remove any copyright notices placed on data pursuant to this paragraph (c), and to include such notices on all reproductions of the data.

(b) Release, Publication and Use of Data.

- (1) The Subcontractor shall have the right to use, release to others, reproduce, distribute, or publish any data other than computer software first produced or specifically used by the Subcontractor in the performance of this Subcontract, except to the extent such data may be subject to the Federal export control or national security laws or regulations, or unless otherwise provided in this paragraph of this Article or expressly set forth in this Subcontract.
- (2) The Subcontractor agrees that to the extent it receives or is given access to data necessary for the performance of this Subcontract that contain restrictive markings, the Subcontractor shall treat the data in accordance with such markings unless otherwise specifically authorized in writing by JPL.

(3)

- (a) Before the Subcontractor publishes or releases computer software first produced under this Subcontract, it shall first furnish the Contracting Officer with a copy of such software and a statement as to the circumstances of the publication or release.

(T) If the Government desires to obtain Copyright in computer software first produced in the performance of this Subcontract for which claim to copyright has not been made by the Subcontractor, the Contracting Officer or the Institute may direct the Subcontractor to establish, or authorize the establishment of, claim to copyright in said computer software and to assign, or obtain the assignment of, such copyright to the Government or its designated assignee.

(U) Whenever the word "establish" is used in this clause, with reference to a claim to copyright, it shall be construed to mean "assert."

(b) Unauthorized Marking of Data.

- 1. Notwithstanding any other provisions of this Subcontract concerning inspection or acceptance, if any data delivered under this Subcontract are marked with the notices specified in subparagraph (g)(2) or (g)(3) of this Article and use of such is not authorized by this Article, or if such data bears any other restrictive or limiting markings not authorized by this Subcontract, JPL may at any time either return the data to the Subcontractor, or cancel or ignore the markings. However, the following procedures shall apply prior to canceling or ignoring the markings:
 - (A) JPL shall make written inquiry to the Subcontractor affording the Subcontractor 30 days from receipt of the inquiry to provide written justification to substantiate the propriety of the markings;
 - (B) If the Subcontractor fails to respond or fails to provide written justification to substantiate the propriety of the markings within the 30-day period (or a longer time not exceeding 90 days approved in writing by the Contracting Officer through JPL for good cause shown), the Government or JPL shall have the right to cancel or ignore the markings at any time after said period and the data will no longer be made subject to any disclosure prohibitions.
 - (C) If the Subcontractor provides written justification to substantiate the propriety of the markings within the period set in subdivision (e)(1)(A) of this Article, the Contracting Officer through JPL shall consider such written justification and determine whether or not the markings are to be canceled or ignored. If the Contracting Officer through JPL determines that the markings are authorized, the Subcontractor shall be so notified in writing. If the Contracting Officer through JPL determines, with concurrence of NASA, that the markings are not authorized, the Contracting Officer through JPL shall furnish the Subcontractor a written determination, which determination shall become the final Government decision regarding the appropriateness of the markings unless the Subcontractor files suit in a court of competent jurisdiction within 90 days of receipt of the Contracting Officer's decision. The Government and JPL shall continue to abide by the markings under this subdivision (e)(1)(C) until final resolution of the matter either by the Contracting Officer's determination becoming final (in which instance the

Government or JPL shall thereafter have the right to cancel or ignore the markings at any time and the data will no longer be made subject to any disclosure prohibitions), or by final disposition of the matter by court decision if suit is filed.

- (4) The time limits in the procedures set forth in subparagraph (e)(1) of this Article may be modified in accordance with NASA regulations implementing the Freedom of Information Act (5 U.S.C. 552) if necessary to respond to a request there under.
- (5) This paragraph (e) does not apply if this Subcontract is for a major system or for support of a major system by a civilian agency other than NASA and the U.S. Coast Guard agency subject to the provisions of Title III of the Federal Property and Administrative Services Act of 1949.
- (6) (RESERVED)

(c) Omitted or Incorrect Markings.

1. Data delivered to the Government or JPL without either the limited rights or restricted rights notice as authorized by paragraph (g) of this Article, or the copyright notice required by paragraph (c) of this Article, shall be deemed to have been furnished with unlimited rights, and the Government and the Institute assume no liability for the disclosure, use, or reproduction of such data. However, to the extent the data has not been disclosed without restriction outside the Government or JPL, the Subcontractor may request, within six months (or longer time approved by JPL for good cause shown) after delivery of such data, permission to have notices placed on qualifying data at the Subcontractor's expense, and JPL may agree to do so if the Subcontractor:
 1. Identifies the data to which the omitted notice is to be applied;
 2. Demonstrates that the omission of the notice was inadvertent;
 3. Establishes that the use of the proposed notice is authorized; and
 4. Acknowledges that the Government and the Institute have no liability with respect to the disclosure, use, or reproduction of any such data made prior to the addition of the notice or resulting from the omission of the notice.

(7) JPL may also:

- (a) Permit correction at the Subcontractor's expense of incorrect notices if the Subcontractor identifies the data on which correction of the notice is to be made, and demonstrates that the correct notice is authorized; or
- (b) Correct any incorrect notices.
- (d) Protection of Limited Rights Data and Restricted Computer Software.
 - When data other than that listed in subdivisions (b)(1)(A), (B), and (C) of this Article are specified to be delivered under this Subcontract and qualify as either limited rights data or restricted computer software, if the Subcontractor desires to continue protection of such data, the Subcontractor shall withhold such data and not furnish them to JPL under this Subcontract. As a condition to this withholding, the Subcontractor shall identify the data being withheld and furnish form, fit, and function data in lieu thereof. Limited rights data that are formatted as a computer database for delivery to JPL are to be treated as limited rights data and not restricted computer software.
 - Notwithstanding paragraph (g)(1) of this Article, the Subcontract may identify and specify the delivery of limited rights data, or JPL or the Contracting Officer may require by written request the delivery of limited rights data that has been withheld or would otherwise be withholdable. If delivery of such data is so required, the Subcontractor may affix the following "Limited Rights Notice" to the data and the Institute and the Government will thereafter treat the data, subject to the provisions of paragraphs (e) and (f) of this Article, in accordance with such Notice:

LIMITED RIGHTS NOTICE

- These data are submitted with limited rights under Government contract No. NAS7-03001 (and JPL First-tier Subcontract No. _____). These data may be reproduced and used by the Institute or the

Government with the express limitation that they will not, without written permission of the Subcontractor, be used for purposes of manufacture nor disclosed outside the Institute or the Government; except that the Institute or the Government may disclose these data outside the Institute or the Government for the following purposes, if any, provided that the Institute or the Government makes such disclosure subject to prohibition against further use and disclosure:

- Use by support service Subcontractors.
- (RESERVED)

(e) This Notice shall be marked on any reproduction of these data, in whole or in part.

(End of notice)

(8)

Notwithstanding paragraph (g)(1) of this Article, the Subcontract may identify and specify the delivery of restricted computer software, or JPL or the Contracting Officer may require by written request the delivery of restricted computer software that has been withheld or would otherwise be withholdable. If delivery of such computer software is so required, the Contractor may affix the following "Restricted Rights Notice" to the computer software and the Institute and the Government will thereafter treat the computer software, subject to the provisions of paragraphs (e) and (f) of this Article, in accordance with the Notice:

RESTRICTED RIGHTS NOTICE

This computer software is submitted with restricted rights under Government contract No. NAS7-03001 (and JPL First-tier Subcontract No. _____). It may not be used, reproduced, or disclosed by the Institute or the Government except as provided in paragraph (b) of this Notice or as otherwise expressly stated in the Subcontract.

This computer software may be:

Used or copied for use in or with the computer or computers for which it was acquired, including use at any Institute or Government installation to which such computer or computers may be transferred;

Used or copied for use in a backup computer if any computer for which it was acquired is inoperative;

Reproduced for safekeeping (archives) or backup purposes;

Modified, adapted, or combined with other computer software, provided that the modified, combined, or adapted portions of the derivative software incorporating restricted computer software are made subject to the same restricted rights;

Disclosed to and reproduced for use by support service Subcontractors in accordance with subparagraphs (b)(1) through (4) of this Article, provided the Institute or the Government makes such disclosure or reproduction subject to these restricted rights; and

Used or copied for use in or transferred to a replacement computer.

- (f) Notwithstanding the foregoing, if this computer software is published copyrighted computer software, it is licensed to the Institute and the Government, without disclosure prohibitions, with the minimum rights set forth in paragraph (b) of this Article.
- (g) Any other rights or limitations regarding the use, duplication, or disclosure of this computer software are to be expressly stated in, or incorporated in, the Subcontract.
- (h) This Notice shall be marked on any reproduction of this computer software, in whole or in part.

(End of notice)

(D) Where it is impractical to include the Restricted Rights Notice on restricted computer software, the following short-form Notice may be used in lieu thereof:

RESTRICTED RIGHTS NOTICE - SHORT FORM

Use, reproduction, or disclosure is subject to restrictions set forth in Contract No. NAS7-03001 (and First-tier Subcontract No. _____ with [name of First-tier Subcontractor]).

(End of notice)

- (E) If restricted computer software is delivered with the copyright notice of 17 U.S.C. 401, it will be presumed to be published copyrighted computer software licensed to the Institute and the Government without disclosure prohibitions, with the minimum rights set forth in paragraph (b) of this Article, unless the Subcontractor includes the following statement with such copyright notice: "Unpublished - rights reserved under the Copyright Laws of the United States."
- (i) First-tier Subcontracting. The Subcontractor has the responsibility to obtain from its First-tier Subcontractors all data and rights therein necessary to fulfill the Subcontractor's obligations to the Government and the Institute under this Subcontract. If a First-tier Subcontractor refuses to accept terms affording the Government or the Institute such rights, the Subcontractor shall promptly bring such refusal to the attention of JPL and not proceed with First-tier Subcontract award without further authorization.
- (j) Relationship to Patents. Nothing contained in this Article shall imply a license to the Government or the Institute under any patent or be construed as affecting the scope of any license or other right otherwise granted to the Government or the Institute.
- (k) Inspection of Data Withheld. The Subcontractor agrees, except as may be otherwise specified in this Subcontract for specific data items listed as not subject to this paragraph, that the Contracting Officer, or an authorized representative, or JPL may, up to three years after acceptance of all items to be delivered under this Subcontract, inspect at the Subcontractor's facility any data withheld pursuant to subparagraph (g)(1) of this Article, for purposes of verifying the Subcontractor's assertion pertaining to the limited rights or restricted rights status of the data or for evaluating work performance. Where the first-tier First-tier Subcontractor whose data are to be inspected demonstrates to the Contracting Officer that there would be a possible conflict of interest if the inspection were made by a particular representative, the Contracting Officer shall designate an alternate inspector.

RIGHTS IN TECHNICAL PROPOSAL DATA

[CT, FP-NR&D, FP-R&D, LH/T&M, T&MC, CREI – 09/04] [FAR 52.227-23 – 06/87]

(This Article applies to Subcontracts resulting from a proposal containing technical data. The Article does not cover rights to commercial or financial information contained in the successful proposal.)

It is agreed that as a condition of the award of this Subcontract, and notwithstanding the conditions of any notice appearing thereon, the Government and the Institute shall have the right to use, duplicate, and disclose, and have others so do, for any purpose whatsoever, the technical data contained in the proposals upon which this Subcontract and any future modifications are based.

SAFETY AND HEALTH – CREI

[CREI – 09/04] [NFS 1852.223-70 – 04/02]

(This Article is applicable only if the Subcontract involves work either (i) conducted completely or partly on premises owned or controlled by the Government, (ii) that includes construction, alteration or repair of facilities in excess of \$25,000, (iii) regardless of place of performance, that involves hazards that could endanger the public, astronauts and pilots, the NASA workforce (including Subcontractor employees working on NASA Subcontracts) or high value equipment or property and the hazards are not adequately addressed by Occupational Safety and Health (OSHA) or Department of Transportation (DOT) regulations (if applicable) or (iv) when JPL determines that the assessed risk and consequences of a failure to properly manage and control the hazard(s) warrants use of the clause.)

The Subcontractor shall take all reasonable safety and occupational health measures in performing under this Subcontract and shall, to the extent set forth below, submit a safety plan and a health plan (applicable to the work to be performed under this Subcontract) for JPL's approval. The Subcontractor shall comply with all Federal, State, and local laws applicable to safety and occupational health in effect on the date of this Subcontract and with the safety and occupational health standards, specifications, reporting requirements, and provisions set forth below.

The Subcontractor shall take or cause to be taken any other safety and occupational health measures JPL may reasonably direct. To the extent that the Subcontractor may be entitled to an equitable adjustment for those measures under the terms and conditions of this Subcontract, the equitable adjustment shall be determined pursuant to the procedures of the Article of this Subcontract entitled "Changes," provided, that no adjustment shall be made under this Safety and Health Article for any change for which an equitable adjustment is expressly provided under any other provision of the Subcontract.

Standards. The following safety and health standards, specifications, issuances, and reporting requirements are prescribed pursuant to paragraph (a).

General Standards and Specifications: The Subcontractor shall comply with applicable provisions of the Occupational Safety and Health Standards of the Occupational Safety and Health Act of 1970, Rules and Regulations of the Department of Labor issued pursuant thereto and regulations of states provided for under the Act. Within California the Subcontractor shall comply with applicable provisions of the California Occupational Safety and Health Act of 1973. NASA Procedures and Guidelines (NPGs) 8715. 3, NASA Safety Manual with Changes Through Change I 6/19/02, dated January 24, 2000, shall be used as a general policy guide to establish a safety program to be included in the safety and health plan to be submitted in accordance with paragraph (a) above.

As part of the Subcontractor's safety and health plan, the Subcontractor shall furnish a list of all hazardous operations to be performed, including operations covered by measures indicated in paragraphs (a) and (b) of this Article and a list of other major or key operations required or planned in the performance of the Subcontract, even though not deemed hazardous by the Subcontractor. JPL and the Subcontractor shall jointly decide which operations are to be considered hazardous with JPL as the final authority. Before hazardous operations commence, the Subcontractor shall develop, review, and provide plans for the operation for JPL to review. The Subcontractor's review procedure shall submit for JPL concurrence:

Written hazardous operating procedures for all hazardous operations; and/or

Qualification standards for personnel involved in hazardous operations.

- (9) Flight Program/Project Safety: The Subcontractor shall include in each Program/Project Plan prepared for a flight project a description of the risk management process that addresses the safety needs and special safety monitoring required for the flight program/project. Project Plans containing such requirements will be referenced in the flight project task order issued by the Contracting Officer under the Prime Contract and the Subcontractor shall comply with those requirements.
- (10) Nuclear Safety: Radioactive material will be handled in accordance with appropriate Federal, State, local and tribal regulations and requirements, to specifically include those of the State of California, Department of Energy and/or Nuclear Regulatory Commission. Launching of nuclear materials into space shall be done in accordance with National Security Council/Presidential Directive 25, as of May 8, 1996. Chapter 5, Nuclear safety, of NPG 8715.3, NASA Safety manual provides specific additional NASA requirements.
- (11) Propulsion Safety: The Subcontractor shall comply with all applicable Federal, State, and local requirements applicable to propulsion safety, and the requirements shall be used to establish a propulsion safety program (if applicable) to be included in the safety and health plan to be submitted in accordance with paragraph (a) above.
- (12) Fire Safety: The Subcontractor shall comply with all applicable Federal, State, and Local requirements pertaining to Fire Protection and Life Safety. NASA STD 8719.11, NASA Safety Standard for Fire Protection and Life Safety, dated December 19, 2000, will be followed to ensure safety of NASA facilities.
- (13) Ammunition and Explosive Safety: The Subcontractor shall comply with all applicable Federal, State, and Local requirements applicable to ammunition and explosive safety. The requirements of NSS 1740.12 NASA Safety standard for explosives, propellants and Pyrotechnics, dated August 1993 shall be used to establish a propulsion safety program to be included in the safety and health plan to be submitted in accordance with paragraph (a) above.
- (14) Pressure Vessel and Pressure System Safety: The Subcontractor shall establish a pressure systems safety and recertification program in accordance with NPD 8710.5, NASA Safety Policy for Pressure vessels and Systems, dated march 17, 1998

(15) Any additional safety and health standards, specifications, issuances and reporting requirements set forth in this Subcontract.

- (l) The safety and health plan to be submitted by the Subcontractor pursuant to paragraph (a) above shall implement the requirements of this Article and of the standards and specifications of paragraph (c) of this Article and shall describe the means to be employed by the Subcontractor to monitor and enforce said requirements. The plan shall include the Subcontractor's standards and criteria for imposing safety and health standards upon its First-tier Subcontractors of any tier and its plans and procedures for monitoring compliance with such standards. A safety and health plan for similar work performed by the Subcontractor on a Federal Subcontract may be submitted for review and approval under this Article.
- (m) The Subcontractor shall immediately notify and promptly report to JPL any accident, incident, or exposure resulting in fatality, lost-time occupational injury, occupational disease, contamination of property (or, if this Subcontract sets forth any acceptable threshold limits of contamination, any contamination of property beyond those stated limits) or property loss of \$25,000 or more, or Close Call (a situation or occurrence with no injury, no damage or only minor damage (less than \$ 1000) but possesses the potential; to cause any type mishap, or any injury, damage or negative mission impact) that may be of immediate interest to NASA, arising out of work performed under this Subcontract. The Subcontractor is not required to include in any report an expression of opinion as to the fault or negligence of any employee. Service Subcontractors (excluding construction Subcontracts) shall provide quarterly reports specifying lost-time frequency rate, number of lost-time injuries, exposure, and accident/incident dollar losses as specified in the Subcontract Schedule. The Subcontractor shall investigate all work-related incidents or accidents and Close Calls to the extent necessary to determine their causes and furnish the JPL a report, in such form as JPL may require, of the investigative findings and proposed or completed corrective actions. In addition, the Subcontractor shall comply with the illness, incident and injury experience reporting requirements set forth below or elsewhere in this Subcontract.
- (n) Illness, Incident and Injury Experience Reports.

Reports required by this Article or elsewhere in this Subcontract shall be furnished in three copies unless otherwise specified.

The following illness, incident, and injury experience reports are prescribed pursuant to paragraph (e) above:

Experience Reports: The Subcontractor shall prepare and submit to JPL quarterly and semi-annual reports of occupational related illness, incidents, injury experience, worker's compensation costs; and Government property damage due to mishaps or natural phenomena in such detail as prescribed in formats approved by the JPL Subcontracts Manager.

Investigative Reports: The Subcontractor shall furnish reports of investigation of individual incidents or accidents or close calls in formats approved by JPL; provided, however, that the Subcontractor shall not be required to furnish personally identifiable information concerning Subcontractor or First-tier Subcontractor employees. Lessons learned from these reports, excluding those related to close calls unless the Subcontractor believes that material value may be derived from such reporting, shall be reported to JPL (for use by JPL as inputs into the NASA Lessons Learned Program).

Mishap Reports: The Subcontractor shall furnish JPL mishap reports and respond to JPL requests for mishap reviews. The Subcontractor shall conduct its own mishap investigations consistent with NPD 8621.1H, NASA Mishap and Close-Call Reporting, Investigation, and Recordkeeping Policy, dated October 2, 2002, with the understanding that all references to NASA in that policy shall be interpreted to mean the Subcontractor. The Subcontractor shall utilize the NPD 8621.1, dated June 2, 2000 procedures as guidelines. The Subcontractor shall also report to the JPL Subcontracts Manager any incidents that may have visibility in the press, mission failures, or mission anomalies that will have high JPL or NASA visibility in the press.

The Subcontractor shall furnish such other reports as JPL determines to be related to the Subcontractor's safety and health program and its experiences thereunder.

- (o)

JPL may notify the Subcontractor in writing of any noncompliance with this Article and specify corrective actions to be taken. The Subcontractor shall promptly take and report any necessary corrective action.

When the JPL Subcontracts Manager becomes aware of noncompliance that may pose a serious or imminent danger to safety and health of the public, astronauts and pilots, the NASA workforce (including Subcontractor employees working on NASA Subcontracts) or high value mission critical equipment or property, the JPL Subcontracts Manager shall notify the Subcontractor orally, with written conformation. The Subcontractor shall promptly take and report any necessary corrective action. If the Subcontractor fails or refuses to institute prompt corrective action in accordance with subparagraph (g)(1) of this Article, JPL may invoke the stop work order Article of this Subcontract or any other remedy legally available to the Institute in the event of such failure or refusal.

- (p) The Subcontractor (or First-tier Subcontractor or supplier) shall cause the substance of this Article, including this paragraph (h) and any applicable provisions of this Subcontract, with any appropriate changes of designations of the parties, to be inserted in First-tier Subcontracts of every tier which involve work to which this Article is applicable as specified in the preamble above.
- (q) The Subcontractor agrees that authorized representatives of JPL or the Contracting Officer shall have access to and the right to examine the sites or areas where work under this Subcontract is being performed in order to determine the adequacy of the Subcontractor's safety and health measures under this Article.

SMALL BUSINESS FIRST-TIER SUBCONTRACTING PLAN

[A&E, CT, FP-NR&D, FP-R&D, T&MC, LH/T&M, FPC, CREI – 09/04] [FAR 52.219-9 – 01/02]

(This Article is applicable if the basic Subcontract or any separate modification exceeds \$500,000 [\$1,000,000 for construction of any public facility], except it does not apply to Subcontracts with small businesses or orders under GSA Subcontracts. Work performed outside the United States is exempt from the requirements of this Article.)

If there will be any First-tier Subcontracting under this Subcontract and the basic or any modification exceeds \$500,000, (\$1,000,000 for construction of any public facility), the Subcontractor agrees to submit for JPL approval a First-tier Subcontracting Plan (Plan) that separately addresses First-tier Subcontracting with small business, veteran-owned small business, service-disabled veteran-owned small business, HUBzone small business concerns, small disadvantaged concerns, and women-owned business concerns. The Subcontractor further agrees to and to provide a written update to the Plan for every modification exceeding \$500,000 (\$1,000,000 for construction of a public facility). JPL's approval will be based on the requirements in JPL form 0294 entitled "Requirements for a First-tier Subcontracting Plan." The approved Plan and approved updates will be deemed incorporated into this Subcontract.

If a Plan is required under this Subcontract, SF 294, "First-tier Subcontracting Report for Individual Subcontracts," and SF 295, "Summary First-tier Subcontract Report," are deliverables, which must be submitted by the Subcontractor to the JPL Subcontracts Manager in accordance with the instructions on the forms.

It is understood and agreed that the failure of the Subcontractor to comply in good faith with the Article of this Subcontract entitled "Utilization of Small, Small Disadvantaged, and Women-Owned Small Business Concerns," or with any Plan required to be included in this Subcontract, shall be a material breach of this Subcontract.

SMALL BUSINESS FIRST-TIER SUBCONTRACTING REPORTING

[A&E, CT, FP-NR&D, FP-R&D, T&MC, LH/T&M, FPC, CREI – 09/04] [NFS 1852.219-75 – 05/99]

(This Article is applicable if the basic Subcontract or any separate modification exceeds \$500,000 [\$1,000,000 for construction of any public facility], except it does not apply to Subcontracts with small businesses or orders under GSA Subcontracts. Work performed outside the United States is exempt from the requirements of this Article.)

The Subcontractor shall submit the Summary First-tier Subcontract Report (Standard Form (SF) 295) semiannually for the reporting periods specified in block 4 of the form. All other instructions for SF 295 remain in effect.

The Subcontractor shall include this clause in all First-tier Subcontracts that include the Article titled "Small Business Subcontracting Plan" (FAR 52.219-9)

SUBCONTRACT WORK HOURS AND SAFETY STANDARDS ACT - OVERTIME COMPENSATION

[CT, FP-NR&D, FP-R&D, T&MC, LH/T&M, FPC, CREI, A – E, RSA – 09/04] [FAR 22.305 - 7/95; 52.222-4 - 09/00]

(Work performed outside the United States is exempt from the requirements of this Article.)

- (A) This provision is not applicable to Subcontracts for supplies, materials, or articles ordinarily available in the open market, Subcontracts for transportation by land, air, or water, or for the transmission of intelligence, Subcontracts of \$100,000 or less, Subcontracts to be performed solely within a foreign country or within a territory under United States jurisdiction other than a state, the District of Columbia, Puerto Rico, the Virgin Islands, Outer Continental Shelf Lands as defined in the Outer Continental Shelf Lands Act, American Samoa, Guam, Wake Island, and Johnson Island, and Subcontracts (or portions of Subcontracts) for supplies in connection with which any required services are merely incidental to the Subcontract and do not require substantial employment of laborers or mechanics, exempt under regulations of the Secretary of Labor (29 CFR 5.15), Subcontracts requiring work to be done solely in accordance with the Walsh-Healey Public Contract Acts, and Subcontracts for commercial items.
- (B) FAR clause 52.222-4 (Sept 2000) is hereby incorporated by reference in total, except that:
 - (A) The words "JPL Subcontracts Manager or JPL's Contracting Officer" shall be substituted for the words "Contracting Officer" wherever they appear;
 - (B) The word "Subcontractor" shall be substituted for the words "Prime Contractor" wherever they appear; and
 - (C) The words "with JPL" shall be substituted for the words "Federal Contract with the same Prime Contractor" wherever they appear.

SUBCONTRACTOR AND FIRST-TIER SUBCONTRACTOR COST OR PRICING DATA, OR INFORMATION OTHER THAN COST OR PRICING DATA AND PRICE REDUCTION FOR DEFECTIVE COST OR PRICING DATA

[CT, FP-NR&D, FP-R&D, T&MC, LH/T&M, FPC, A - E CREI- 09/04] [FAR 15.403-4 - 10/00; 52.215-11 - 10/97; 52.215-12 - 10/97; 52.215-13 - 10/97; 52.215-20 - 10/97; 52.215-21 - 10/97]

(This Article is applicable if either the basic Subcontract or any modification exceeds \$650,000.)

- (A) Subcontractor Cost or Pricing Data.
 - (1) Whenever the negotiated price of the basic Subcontract, or the negotiated price of any change, or other modification to this Subcontract is expected to exceed \$650,000, the Subcontractor agrees to furnish the Institute certified cost or pricing data, unless a waiver applies or a determination is made that an exception applies (the price is based on adequate price competition, prices set by law or regulation, or the Subcontract is for a commercial item). Whenever certified cost or pricing data are required, the Subcontractor agrees to furnish the data in the format requested by JPL or if JPL does not so specify, per Table 15-2 of FAR 15.408 and agrees to submit the JPL certificate form JPL 2496 or equivalent as soon as practicable after agreement on price but before award.
 - (2) Exceptions to Cost or Pricing Data.
 - (A)
 - (A) Basic Subcontracts. In lieu of submitting cost or pricing data for the basic Subcontract, offerors may submit a written request for exception by submitting the information described under paragraph (B), below.
 - (ii) Subcontract Modifications. In lieu of submitting cost or pricing data for modifications under this Subcontract, for price adjustments expected to exceed \$650,000 on the date of the agreement on price or the date of the award, whichever is later, the Subcontractor may submit a written request for exception by submitting the information described under paragraph (B), below.
 - (iii) JPL may require additional supporting information, but only to the extent necessary to determine whether an exception should be granted, and whether the price is fair and reasonable.
 - (B) The relevant part of the following information is to be submitted when requesting an exception:
 - (a) Identification of the law or regulation establishing the price offered. If the price is controlled under law by periodic rulings, reviews, or similar actions of a governmental body, attach a copy of the controlling document, unless it was previously submitted to the contracting office.

- (iv) For a commercial item exception, the offeror shall submit, at a minimum, information on prices at which the same item or similar items have previously been sold that is adequate for evaluating the reasonableness of the price for this acquisition. Such information may include:
 - a. For catalog items, a copy of or identification of the catalog and its date, or the appropriate pages for the offered items, or a statement that the catalog is on file in the buying office to which the proposal is being submitted. Provide a copy or describe current discount policies and price lists (published or unpublished), e.g., wholesale, original equipment manufacturer, or reseller. Also explain the basis of each offered price and its relationship to the established catalog price, including how the proposed price relates to the price of recent sales in quantities similar to the proposed quantities.
 - b. For market-priced items, the source and date or period of the market quotation or other basis for market price, the base amount, and applicable discounts. In addition, describe the nature of the market.
 - c. For items included on an active Federal Supply Service Multiple Award Schedule or any other Federal Government Subcontract, proof that an exception has been granted for the schedule item.
 - (v) Information on modifications of Subcontracts or First-tier Subcontracts for commercial items. If (i) the original Subcontract or First-tier Subcontract was granted an exception from cost or pricing data requirements because the price agreed upon was based on adequate price competition, or prices set by law or regulation, or was a Subcontract or First-tier Subcontract for a commercial item; and (ii) the modification (to the Subcontract or First-tier Subcontract) is not exempted based on one of these exceptions, then the Subcontractor may provide information to establish that the modification would not change the Subcontract or First-tier Subcontract from a Subcontract or First-tier Subcontract for the acquisition of a commercial item to a Subcontract or First-tier Subcontract for the acquisition of an item other than a commercial item.
- (C) The Offeror/Subcontractor grants JPL or an authorized representative the right to examine, at any time before award, books, records, documents, or other directly pertinent records to verify any request for an exception under this provision, and the reasonableness of price. For items priced using catalog or market prices, or law or regulation, access does not extend to cost or profit information or other data relevant solely to the Offeror's/Subcontractor's determination of the prices to be offered in the catalog or marketplace.
- (b) First-tier Subcontractor Cost or Pricing Data.
- (A) Before awarding any First-tier Subcontract expected to exceed \$650,000 when entered into, or before pricing any First-tier Subcontract modification involving a pricing adjustment expected to exceed \$650,000, the Subcontractor shall require the First-tier Subcontractor to submit cost or pricing data (actually or by specific identification in writing), unless the First-tier Subcontract or modification is eligible for an exception listed in paragraph (a), above.
 - (3) The requirement for obtaining certified cost or pricing data with respect to any First-tier Subcontract change or other modification does not apply to any First-tier Subcontract change or modification, at any tier, where this Subcontract is a firm fixed-price or firm fixed-price with escalation Subcontract unless such change or other modification results from a Subcontract change or other modification to this Subcontract, nor does it apply to a First-tier Subcontract change or other modification, at any tier, where this Subcontract is not firm fixed-price or firm fixed-price with escalation, unless the price for such change or modification becomes reimbursable under this Subcontract.
 - (4) The Subcontractor shall require the First-tier Subcontractor to certify in substantially the form prescribed in FAR Part 15, and any corresponding implementing or supplementing provisions in the NFS, that, to the best of its knowledge and belief, the data submitted under subparagraph (b)(1) above were accurate, complete, and current as of the date of agreement on the negotiated price of the First-tier Subcontract or First-tier Subcontract modification.
 - (5) In each First-tier Subcontract that exceeds \$650,000 when entered into, the Subcontractor shall insert either:

- (A) The substance of this Article, including this paragraph (4), if paragraph (b)(1) above requires submission of cost or pricing data for the First-tier Subcontract; or
 - (B) The substance of the clause at FAR 52.215-13, "Subcontractor Cost or Pricing Data - Modifications," including any corresponding implementing or supplementing provisions in the NFS.
- (c) Price Reduction for Defective Cost or Pricing Data.
- (a) If any price, including profit or fee, negotiated in connection with this Subcontract, or any cost reimbursable under this Subcontract, was increased by any significant amount because (i) the Subcontractor or a First-tier Subcontractor furnished cost or pricing data that were not complete, accurate, and current as certified in its Certificate of Current Cost or Pricing Data, (ii) a First-tier Subcontractor or prospective First-tier Subcontractor furnished the Subcontractor cost or pricing data that were not complete, accurate, and current as certified in the Subcontractor's Certificate of Current Cost or Pricing Data, or (iii) any of these parties furnished data of any description that were not accurate, the price or cost shall be reduced accordingly and the Subcontract shall be modified to reflect the reduction.
 - (6) Any reduction in the Subcontract price under paragraph (1) above due to defective data from a prospective First-tier Subcontractor that was not subsequently awarded the First-tier Subcontract shall be limited to the amount, plus applicable overhead and profit markup, by which (i) the actual First-tier Subcontract or (ii) the actual cost to the Subcontractor, if there was no First-tier Subcontract, was less than the prospective First-tier Subcontract cost estimate submitted by the Subcontractor; provided, that the actual First-tier Subcontract price was not itself affected by defective cost or pricing data.
- (7)
- (1) If the Contracting Officer determines under paragraph (1) of this Article that a price or cost reduction should be made, the Subcontractor agrees not to raise the following matters as a defense:
 - (A) The Subcontractor or First-tier Subcontractor was a sole source supplier or otherwise was in a superior bargaining position and thus the price of the Subcontract would not have been modified even if accurate, complete, and current cost or pricing data had been submitted.
 - (vi) The Institute should have known that the cost or pricing data in issue were defective even though the Subcontractor or First-tier Subcontractor took no affirmative action to bring the character of the data to the attention of JPL.
 - (vii) The Subcontract was based on an agreement about the total cost of the Subcontract and there was no agreement about the cost of each item procured under the Subcontract.
 - (viii) The Subcontractor or First-tier Subcontractor did not submit a Certificate of Current Cost or Pricing Data.
 - (B)
 - (A) Except as prohibited by subdivision (c)(3)(B)(ii) of this Article, an offset in an amount determined appropriate by the Contracting Officer based upon the facts shall be allowed against the amount of a Subcontract price reduction if:
 - a. The Subcontractor certifies to the Contracting Officer that, to the best of the Subcontractor's knowledge and belief, the Subcontractor is entitled to the offset in the amount requested; and
 - b. The Subcontractor proves that the cost or pricing data were available before the "as of" date specified on its Certificate of Current Cost or Pricing Data and that the data were not submitted before such date.
 - (ix) An offset shall not be allowed if:
 - i. The understated data were known by the Subcontractor to be understated before the "as of" date specified on its Certificate of Current Cost or Pricing Data or The understated data was known by the Subcontractor to be understated when the Certificate of Current Cost or Pricing Data was signed; or
 - ii. The Government proves that the facts demonstrate that the Subcontract price would not have increased in the amount to be offset even if the available data had been submitted before the "as of" date specified on its Certificate of Current Cost or Pricing Data.

- (2) In the event of a disagreement between the Contracting Officer and the Subcontractor with respect to a question of fact involved in the Contracting Officer's determination to reduce the price of this Subcontract, the Subcontractor may, subject to the prior approval of the Institute, which approval will not be unreasonably withheld, process such disagreement as a dispute to the extent that it may be entitled to do so under the provisions of the Prime Contract.
- (b) If any reduction in the Subcontract price under this Article reduces the price of items for which payment was made prior to the date of the modification reflecting the price reduction, the Subcontractor shall be liable to and shall indemnify the Institute for costs incurred by the Institute involved in repayments to the Government resulting from the Subcontractor's defective pricing including:
 - (a) Simple interest on the amount of such overpayment to be computed from the date(s) of overpayment to the Subcontractor to the date the Government is repaid by the Institute at the applicable underpayment rate effective for each quarter prescribed by the Secretary of the Treasury under 26 U.S.C. 6621(a)(2); and A penalty equal to the amount of the overpayment, if the Subcontractor or First-tier Subcontractor knowingly submitted cost or pricing data which were incomplete, inaccurate, or noncurrent.

TECHNICAL DIRECTION – COST TYPE

[CT, CREI – 09/04] [NFS 1852.242-70 – 09/03]]

Performance of the work under this Subcontract is subject to the written technical direction of the Contract Technical Manager (CTM). "Technical direction" means a directive to the Subcontractor that approves approaches, solutions, designs, or refinements; fills in details or otherwise completes the general description of work or documentation items; shifts emphasis among work areas or tasks; or furnishes similar instruction to the Subcontractor. Technical direction includes requiring studies and pursuit of certain lines of inquiry regarding matters within the general tasks and requirements of this Subcontract.

The CTM does not have the authority to, and shall not, issue any instruction purporting to be technical direction that--

Constitutes an assignment of additional work outside the statement of work;

Constitutes a change as defined in the changes clause;

Constitutes a basis for any increase or decrease in the total estimated Subcontract cost, the fixed fee (if any), or the time required for Subcontract performance;

Changes any of the expressed terms, conditions, or specifications of the Subcontract; or

Interferes with the Subcontractor's rights to perform the terms and conditions of the Subcontract.

- (b) All technical direction shall be issued in writing by the CTM.
- (c) The Subcontractor shall proceed promptly with the performance of technical direction duly issued by the CTM in the manner prescribed by this clause and within the CTM's authority. If, in the Subcontractor's opinion, any instruction or direction by the CTM falls within any of the categories defined in paragraph (b) of this clause, the Subcontractor shall not proceed but shall notify the JPL Subcontracts Manager in writing within 5 working days after receiving it and shall request the Subcontracts Manager to take action as described in this clause. Upon receiving this notification, the Subcontracts Manager shall either issue an appropriate Subcontract modification within a reasonable time or advise the Subcontractor in writing within 30 days that the instruction or direction is--
 - Rescinded in its entirety; or
 - Within the requirements of the Subcontract and does not constitute a change under the changes clause of the Subcontract, and that the Subcontractor should proceed promptly with its performance.
- (d) A failure of the Subcontractor and Subcontracts Manager to agree that the instruction or direction is both within the requirements of the Subcontract and does not constitute a change under the Changes Article, or a failure to agree upon the Subcontract actions to be taken with respect to the instruction or direction shall be subject to the Disputes Article of this Subcontract.
- (e) Any action(s) taken by the Subcontractor in response to any direction given by any person other than the Subcontracts Manager or the CTM shall be at the Subcontractor's risk.

TERMINATION FOR CONVENIENCE – CREI

[CREI – 09/04] [FAR 52.249-5 – 09/96]

JPL may terminate performance of work under this Subcontract in whole or, from time to time, in part, if JPL determines that a termination is in the interest of the Institute or the Government. JPL shall terminate by delivering to the Subcontractor a Notice of Termination specifying the extent of termination and the effective date.

After receipt of a Notice of Termination and except as directed by JPL, the Subcontractor shall immediately proceed with the following obligations:

Stop work as specified in the notice.

Place no further First-tier Subcontracts or orders (referred to as First-tier Subcontracts in this Article), except as necessary to complete the continued portion of the Subcontract.

Terminate all applicable First-tier Subcontracts and cancel or divert applicable commitments covering personal services that extend beyond the effective date of termination.

Assign to JPL, as directed by JPL, all right, title, and interest of the Subcontractor under the First-tier Subcontracts terminated, in which case JPL shall have the right to settle or pay any termination settlement proposal arising out of those terminations.

With approval or ratification to the extent required by JPL, settle all outstanding liabilities and termination settlement proposals arising from the termination of First-tier Subcontracts; approval or ratification will be final for purposes of this Article.

Transfer title (if not already transferred) and, as directed by JPL, deliver to JPL any information and items that, if the Subcontract had been completed, would have been required to be furnished, including (i) materials or equipment produced, in process, or acquired for the work terminated and (ii) completed or partially completed plans, drawings and information.

Complete performance of the work not terminated.

Take any action that may be necessary, or that JPL may direct, for the protection and preservation of the property related to this Subcontract that is in the possession of the Subcontractor and in which the Government has or may acquire an interest.

Use its best efforts to sell, as directed or authorized by JPL, termination inventory other than that retained by JPL under subparagraph (6) above; provided, however, that the Subcontractor (i) is not required to extend credit to any purchaser and (ii) may acquire the property under the conditions prescribed by, and at prices approved by, JPL. The proceeds of any transfer or disposition will be applied to reduce any payments to be made by the Institute under this Subcontract, credited to the price or cost of the work, or paid in any other manner directed by JPL.

- (f) The Subcontractor shall submit complete termination inventory schedules no later than 120 days from the effective date of termination unless extended in writing by the Contracting Officer upon written request of the Subcontractor within this 120-day period.
- (g) After termination, the Subcontractor shall submit a final termination settlement proposal to JPL in the form and with the certification prescribed by JPL. The Subcontractor shall submit the proposal promptly but no later than six months from the effective date of termination unless extended in writing by JPL upon written request of the Subcontractor within this six-month period. If the Subcontractor fails to submit the termination settlement proposal within the time allowed, JPL may determine, on the basis of information available, the amount, if any, due the Subcontractor because of the termination and shall pay the amount determined.
- (h) Subject to paragraph (d) above, the Subcontractor and JPL may agree upon the whole or any part of the amount to be paid because of the termination. This amount may include reasonable cancellation charges incurred by the Subcontractor and any reasonable loss on outstanding commitments for personal services that the Subcontractor is unable to cancel; provided that the Subcontractor exercised reasonable diligence in diverting such commitments to other operations. The Subcontract shall be amended and the Subcontractor paid the agreed amount.

- (i) The cost principles and procedures in Subpart 31.3 of the FAR and any corresponding implementing or supplementing provisions in the NFS, in effect on the date of this Subcontract, shall govern all costs claimed, agreed to, or determined under this Article; however, if the Subcontractor is not an educational institution, and is a nonprofit organization under Office of Management and Budget (OMB) Circular A-122, "Cost Principles for Nonprofit Organizations," those cost principles in effect on the date of this Subcontract shall apply; provided, that if the Subcontractor is a nonprofit institution listed in Attachment C of OMB Circular A-122, the cost principles at FAR 31.2 and any corresponding implementing or supplementing provisions in the NFS, in effect on the date of this Subcontract, for commercial organizations shall apply to such Subcontractor.
- (j) The Institute may, under the terms and conditions it prescribes, make partial payments against costs incurred by the Subcontractor for the terminated portion of this Subcontract, if the Institute believes the total of these payments will not exceed the amount to which the Subcontractor will be entitled.

TOXIC CHEMICAL RELEASE REPORTING

[CT, FP-NR&D, FP-R&D, T&MC, LH/T&M, FPC, CREI, A - E, RSA - 09/04] [FAR 52.223-14 - 10/00]

(This Article is applicable to all Subcontracts where the value of the Subcontract and all options at the time of award is expected to exceed \$100,000.)

By entering into this Subcontract, the Subcontractor agrees to abide by and accept all of the Terms and Conditions found in the Federal Acquisition Regulations (FAR) at 52.223-14.

TRANSFER OF TECHNICAL DATA UNDER SPACE STATION INTERNATIONAL AGREEMENTS

[CT, FP-NR&D, FP-R&D, T&MC, LH/T&M, FPC, CREI, A - E - 09/04FS 1852.227-87 - 04/89]

(This Article applies to Subcontracts and First-tier Subcontracts in support of Space Station program activities that may involve transfer of technical data subject to the International Traffic in Arms Regulations, 22 CFR parts 120 through 130, or the Export Administration Regulations (EAR), 15 CFR PARTS 730-799 in accordance with the NASA Export Control Program.)

In the cooperative Space Station Freedom Program, NASA has the authority to provide to the international partners all information necessary to implement the multilateral Space Station Intergovernmental Agreement and the Space Station Memoranda of Understanding. NASA is committed under these Space Station agreements to provide its international Space Station partners with certain technical data that are subject to the U.S. export control laws and regulations. NASA will have obtained any necessary approvals from the Department of State for the transfer of any such technical data. Space Station Subcontractors, acting as agents of NASA under the specific written direction of the Contracting Officer, or designated representative, require no other separate approval under the International Traffic in Arms Regulations (ITAR).

The Subcontractor agrees, when specifically directed in writing by the JPL Subcontracts Manager or an authorized JPL representative under this Subcontract, acting upon the written direction of the NASA Contracting Officer or designated representative, to transfer identified technical data to a named foreign recipient, in the manner directed. No export control marking should be affixed to the data unless so directed. If directed, the text of the marking to be affixed will be furnished by NASA through the JPL Subcontracts Manager or an authorized JPL representative under this Subcontract.

It should be emphasized that the transfer is limited solely to those technical data which NASA specifically identifies and directs the Subcontractor to transfer in accordance with paragraph (b), above, and that all other transfers of technical data to foreign entities are subject to the requirements of the U.S. export control laws and regulations.

Nothing contained in this Article affects the allocation of technical data rights between NASA and the Subcontractor or any First-tier Subcontractors as set forth in the "Rights in Data" Article of this Subcontract, nor the protection of any proprietary technical data that may be available to the Subcontractor or any First-tier Subcontractor under that Article.

The Subcontractor agrees to include this Article, including this paragraph (e), in all First-tier Subcontracts hereunder, appropriately modified to reflect the relationship of the parties.

USE OF RURAL AREA SMALL BUSINESSES

[CT, FP-NR&D, FP-R&D, T&MC, LH/T&M, FPC, CREI, RSA - 09/04FS 1852.219-74 - 09/90]

(Work performed outside the United States is exempt from the requirements of this Article.)

Incorporate by reference NFS 1852.219-74, Use of Rural Area Small Businesses.

UTILIZATION OF SMALL BUSINESS CONCERNS

[CT, CIS, FP-NR&D, FP-R&D, T&MC, LH/T&M, FPC, CREI, RSA – 09/04] [FAR 52.219-8 – 1/00]

(This Article is applicable when the Subcontract amount is expected to be over \$100,000, unless (i) a personal services Subcontract is contemplated, (ii) a commercial items or services Subcontract, or (iii) the Subcontract together with all its First-tier Subcontracts is to be performed entirely outside of any State, territory, or possession of the United States, the District of Columbia, and the Commonwealth of Puerto Rico.)

Incorporate by reference FAR 52.219-8, Utilization of Small Business Concerns.

**MANAGEMENT OF GOVERNMENT PROPERTY
IN THE POSSESSION OF SUBCONTRACTORS
(Reference FAR Parts 45 and 52)**

Purpose

This document prescribes the minimum requirements Subcontractors and lower-tier Subcontractors (hereinafter referred to as Subcontractors) must meet in establishing and maintaining control over Government property

Government property is generally not provided to Subcontractors. The decision to provide Government property to Subcontractors (whether Government-furnished or Subcontractor-acquired) shall be made only after careful consideration of all relevant facts.

If there is any inconsistency between this document and the terms of the Subcontract, the terms of the Subcontract shall govern.

Subcontractor Responsibility

The JPL Subcontractor is directly responsible and accountable for all Government property in accordance with the provisions of the Subcontract. The Subcontractor's system shall be adequate to control, protect, preserve, and maintain all Government property, including residual and scrap material. The Subcontractor shall maintain and make available all records required by this document and account for all Government property until relieved of that responsibility.

Definitions

Government property: All property owned by or leased to the Government or acquired by the Government under the terms of the Subcontract. It includes Facilities, Real Property, Plant equipment (PE), Material, including Work In Process (WIP), Special Tooling (ST), Special Test Equipment (STE), and Agency-Peculiar Property (APP).

Reportable Equipment: Plant equipment, Special Test Equipment including Components, Special Tooling, and Non-flight Space Property, including Ground Support Equipment (GSE), that is:

- Commercially available and used as a separate item or component of a system;
- Valued at \$1,000 or more; and
- Identifiable by a manufacturer and model number.

Work in Process (WIP): Consists of property items under development (not complete) and includes the costs of all WIP regardless of value for all categories of property. The costs of WIP for assets destined for permanent operation in space such as satellites, space probes, and their components should NOT be reported.

See FAR Sections 45.101, 301, 501, and 601 for additional property definitions

Subcontractor Reporting

Monthly Report: The Subcontractor shall provide a completed Contractor-Held Asset Tracking System (CHATS) Report to JPL on the 3rd business day of each month if the following reporting criteria are met:

- Taggable property (PE, ST, STE & APP) over \$100K; or
- Material and WIP regardless of value.

NF 1018 Annual Report: The Subcontractor shall submit a completed NASA Form 1018, "NASA Property in the Custody of Contractors" annually to JPL.

Annual Results of Inventories: The Subcontractor shall submit the following to JPL promptly after completing an annual physical inventory:

- (1) A listing that identifies all discrepancies disclosed by a physical inventory;
- (2) A signed statement that physical inventory of all or certain classes of Government property was completed on a given date; and
- (3) Certification that the official property records were found to be in agreement except for any discrepancies reported.

Loss, Damaged or Destroyed Property: Loss of Government property in the Subcontractor's possession must be identified within 30 days of discovery, along with a request for relief of accountability and a corrective action plan.

At the time of receipt, the Subcontractor shall report to JPL, in writing, all cases of overages or shortages.

The removal of Government property to storage, or its contemplated transfer, does not relieve the Subcontractor of these responsibilities.

The Subcontractor's maintenance program shall provide for disclosing and reporting the need for major repair, replacement, and other capital rehabilitation work for Government property in its possession or control.

Acquiring and Tagging Government Property

Form DD 1419: A DD 1419 will be prepared for each item of Reportable Equipment to be acquired by the Subcontractor valued at \$1,000 or greater. Instructions for preparing the DD 1419 are contained in NASA FAR Supplement (NFS) 18-45.71032.

Equipment under the \$1,000 threshold does not require a DD 1419, but must be reported to JPL.

Tagging Property: Property Tags must be requested within 30 days of receipt of property by the Subcontractor.

- NASA NEMS tags shall be affixed to property of \$1,000 (Sensitive items over \$100) or more, as directed by JPL.
- "D" tags shall be affixed to all property not meeting the NEMS tagging reporting requirements above.
- Include the following information in a Microsoft Excel file (.xls) to JPL when requesting a tag (NEMS or D):
 - Description,
 - FSC Manufacturer,
 - Model Number,
 - Serial Number,
 - Cost,
 - Subcontract Number,
 - Date in Service,
 - Property Type.

All markings shall be removed or obliterated when Government property is sold, scrapped, or donated.

Sensitive Item List: The sensitive items list may be located at http://acquisition.jpl.nasa.gov/Sensitive_Item_List.pdf. These items may fall below the \$1,000 threshold, but are considered sensitive or pilferable and require a NEMS tag.

Title Vesting: *(For University Subcontracts only)* A JPL Form 2710 "Vesting of Title" is required for items specifically approved by JPL, in writing, to be purchased with funds available for research and having an acquisition cost of \$5,000 or less. The University shall request title when they submit the DD 1419 for pre-acquisition screening.

Excess Government Property: The Subcontractor shall report excess Government property to JPL, utilizing Plant Clearance Automated Reutilization Screening System (PCARSS) or Inventory Schedule (Form 1428) when the property is no longer required on the Subcontract. See FAR 45.606 for additional clarification. A template for the report is available at <https://www.pcarss.dcm.mil/>.

Shipment of Government Property: Adequate descriptions of property and accurate dollar values, including the Form DD 1149 shall be included with the shipment and also forwarded to the JPL Property Administrator.

Property Closeout: A Property Closeout Certificate, JPL form 0948, shall be signed by the Subcontractor's authorized representative and returned to JPL prior to final payment.

EXHIBIT 1

Jet Propulsion Laboratory

California Institute of Technology

4800 Oak Grove Drive

Pasadena, California 91109-8099

(818) 354-4321

PROPERTY CLOSE-OUT CERTIFICATE

The undersigned Contractor, having completed the work called for by Contract No. _____
dated _____, with the California Institute of Technology, Jet Propulsion
Laboratory, certifies that:

(check one, as appropriate)

☐

All Government property (as defined in FAR 45.101) has been disposed of by the Contractor and its subcontractors, in accordance with the terms of the Contract.

☐

No Government property was furnished to or acquired by the Contractor or its subcontractors.

Contractor

Authorized Representative Signature

Date

Title

JPL Tagging Template

for Acquired/Fabricated Property

Exhibit 2

Item	Description	Manufacturer (If fabricated, identify company made by)	Model # (Use model or part number)	Serial #	Cost (Provide acquisition cost)	PO # (Use contract number)	Date In Service (DD-Month- Yr)	FSC (If Known)	JPL Project/Task (Use Project and Task assigned to contract)	Property Type (Identify weather equipment, special test, special tooling or agency peculiar property)

RELEASE OF INFORMATION

This Subcontract with the Jet Propulsion Laboratory (JPL) constitutes a First-tier Subcontract under a prime contract between the California Institute of Technology and the National Aeronautics and Space Administration (NASA). It is NASA's policy to provide the widest practical dissemination of information on all of its activities. Since 90% of NASA's research and development effort is performed by private industry, Subcontractors and First-tier Subcontractors have played a large role in this process.

In accordance with this policy, the Subcontractor may want to issue press releases or plan publicity and advertising from time to time, and the Subcontractor will be expected to respond to queries from information media.

Close coordination in all of these matters is required, and JPL requires that all materials (e.g., news and photo releases, exhibit copy, motion picture scripts, advertising copy) directly related to the Subcontractor's work with and for JPL be reviewed by JPL for technical accuracy prior to issuance or use.

To expedite this review, the Subcontractor shall send the materials to the JPL Media Relations Office, mail stop 186-120, stating the Subcontractor's deadlines and referencing this Subcontract number.

In the event this Subcontract is a cost-reimbursement type Subcontract, review by JPL shall not constitute approval for reimbursement of expenditures made in connection with publicity or advertising releases. Any such expenditures remain subject to applicable cost principles.

Nothing contained herein shall be deemed to change existing requirements relating to the release of classified information.

Jet Propulsion Laboratory

California Institute of Technology
4800 Oak Grove Drive
Pasadena, California 91109-8099
(818) 354-4321



NOTIFICATION TO PROSPECTIVE SUBCONTRACTORS OF JPL'S ETHICS POLICIES AND ANTI-KICKBACK HOT LINE

JPL is committed to conducting its business in accordance with the highest standards of ethics and integrity. In this regard, we have an on-going orientation and training program to assure that every JPL employee is aware of this commitment and their individual responsibility for compliance. We must rely on the personal integrity of our employees and the integrity and cooperation of our suppliers and Subcontractors to make sure that these high standards are maintained.

The policies that implement our standards of business conduct state clearly that no employee may solicit or accept any "kickback," gift, gratuity, entertainment, compensation, or favors of any kind from any supplier/Subcontractor or prospective supplier/Subcontractor to JPL. Our policies make it clear that these standards not only apply to procurement personnel but also to employees in all functions and at all levels.

The purpose of this letter is to make sure that you and your employees are aware of our policies, and that together we can achieve and maintain excellence in the conduct of our business relationships.

In the unlikely event that any JPL employee ever attempts to solicit a "kickback," please notify us immediately. JPL has established an Anti-Kickback Hot Line number, (818) 354-9999. Please feel free to call this number collect. The information you provide will be handled with confidentiality, investigated thoroughly, and appropriate action taken.

Thank you for your cooperation and support in this important matter.

VESTING OF PROPERTY WITH SUBCONTRACTOR

TO: _____, JPL Contract Technical Manager (CTM) Date _____

FROM: _____, Subcontracts Manager Mail Stop _____ Ext. _____

REFERENCE: Subcontract No. _____ with _____ (Subcontractor)

Please complete this form **only if title to property purchased by the Subcontractor**, under the referenced Subcontract, **is to vest with the Subcontractor**. Please return this completed form to the Subcontracts Manager. (Attach additional sheets, if necessary)

Items estimated to cost \$5,000 or less:

Property Description Cost	Estimated
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

Items estimated to cost more than \$5,000*:

Property Description Cost	Estimated
_____	_____
_____	_____
_____	_____
_____	_____

Rationale

I have no objection that title to the above described items vest with the Subcontractor.

CTM Concurrence: _____ Date: _____

*NMO Signature Approval: _____ Date: _____

** NASA Property Officer Signature Approval required for items that cost more than \$5,000*

Note to Subcontracts Manager:

Send completed form along with the approved form 1419 to the Property Office, M/S 111/130.



Certifications

(NOTE: The penalty for making false statements in offers is prescribed in 18 U.S.C. 1001.)

I. CERTIFICATION OF NONSEGREGATED FACILITIES

- (a) "Segregated facilities," as used in this provision, means any waiting rooms, work areas, rest rooms and wash rooms, restaurants and other eating areas, time clocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees, that are segregated by explicit directive or are in fact segregated on the basis of race, color, religion, or national origin, because of habit, local custom, or otherwise.
- (b) By the submission of an offer, the offeror certifies that it does not and will not maintain or provide for its employees any segregated facilities at any of its establishments, and that it does not and will not permit its employees to perform their services at any location under its control where segregated facilities are maintained. The offeror agrees that a breach of this certification is a violation of the Equal Opportunity clause in the Subcontract.
- (c) By submission of the offer, the offeror further agrees that (except where it has obtained identical certifications from proposed First-tier Subcontractors for specific time periods) it will:
 - (1) Obtain identical certifications from proposed First-tier Subcontractors before the award of First-tier Subcontracts under which the First-tier Subcontractor will be subject to the Equal Opportunity clause;
 - (2) Retain such certifications in its files; and
 - (3) Forward this certification and the following notice to the proposed First-tier Subcontractors:

NOTICE TO PROSPECTIVE FIRST-TIER SUBCONTRACTORS OF REQUIREMENT FOR CERTIFICATION OF NONSEGREGATED FACILITIES

A Certificate of Nonsegregated Facilities must be submitted before the award of a First-tier Subcontract under which the First-tier Subcontractor will be subject to the Equal Opportunity clause. The certification may be submitted either for each First-tier Subcontractor for all First-tier Subcontracts during a period (i.e., quarterly, semi-annually, or annually).

- (d) By commencing performance of the Subcontract work, the selected Subcontractor certifies to the Nonsegregated Facilities provisions above.

II. CERTIFICATION OF ANTI-KICKBACK COMPLIANCE

(A Certification of Anti-Kickback Compliance must be submitted prior to award.)

By submission of an offer, the offeror certifies that it has read the General Provision entitled "Anti-Kickback Procedures," contained in the solicitation and that neither it nor any of its employees has performed or participated in any prohibited actions, as defined in that provision, relating to the award of the Subcontract. By commencing performance of the Subcontract work, the selected Subcontractor certifies to Anti-Kickback Compliance.

III. CERTIFICATION OF AMERICANS WITH DISABILITIES ACT COMPLIANCE

(The Subcontractor represents and certifies the following as part of its offer.)

By submission of an offer, the offeror certifies that it complies with the Americans with Disabilities Act, 42 U.S.C., 12101 et. seq., and will maintain compliance throughout the life of this Subcontract. By commencing performance of the Subcontract work, the selected Subcontractor certifies to the Americans with Disabilities Act compliance.



IV. CERTIFICATION AND DISCLOSURE REGARDING PAYMENTS TO INFLUENCE CERTAIN FEDERAL TRANSACTIONS

(The following certification applies to all offers and awards in excess of \$100,000.)

- (a) The definitions and prohibitions contained in the General Provision Article "Limitation on Payments to Influence Certain Federal Transactions" are hereby incorporated by reference in paragraph (b) of this Certification.
- (b) By submission of an offer, the offeror certifies to the best of his or her knowledge and belief that on or after December 23, 1989:
 - (1) No Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress on his or her behalf in connection with the awarding of any Federal Subcontract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment or modification of any Federal Subcontract, grant, loan, or cooperative agreement;
 - (2) If any funds other than Federal appropriated funds (including profit or fee received under a covered Federal transaction) have been paid, or will be paid, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress on his or her behalf in connection with this solicitation, the Offeror shall complete and submit, with its offer, OMB Standard Form LLL, "Disclosure of Lobbying Activities," to the JPL Subcontracts Manager; and
 - (3) He or she will include the language of this Certification in all First-tier Subcontract awards at any tier and require that all recipients of First-tier Subcontract awards in excess of \$100,000 shall certify and disclose accordingly.
- (c) Submission of this certification and disclosure is a prerequisite for making or entering into this Subcontract imposed by Section 1352, Title 31, United States Code. Any person who makes an expenditure prohibited under this provision or who fails to file or amend the disclosure form to be filed or amended by this provision, shall be subject to civil penalty of not less than \$20,000 and not more than \$100,000, for each such failure.

V. CERTIFICATION OF FULL DISCLOSURE BY THE SUBCONTRACTOR/OFFEROR REGARDING WHETHER IT ANTICIPATES BEING OR IS DEBARRED, SUSPENDED, OR PROPOSED FOR DEBARMENT BY THE U.S. FEDERAL GOVERNMENT AT TIME OF AWARD

(This certification applies to Subcontracts with a Subcontract value exceeding \$25,000.)

- (a) By submission of an offer, the offeror certifies that it has provided full disclosure in writing to JPL whether as of the anticipated time of award of any Subcontract resulting from the solicitation, it anticipates that it or its principals will be debarred, suspended, or proposed for debarment by the U.S. Federal Government.
- (b) By commencing performance of the Subcontract work, the selected Subcontractor certifies that it has made full disclosure to JPL in writing as to whether as of the time of award it or any of its principals is debarred, suspended, or proposed for debarment by the U. S. Federal Government. (see FAR 9.404 for information on the List of Parties Excluded from Procurement Programs).

VI. CERTIFICATION OF TOXIC CHEMICAL RELEASE REPORTING

(This certification is required prior to award of a Subcontract with an estimated value, including any options, over \$100,000.)

- (a) Submission of this certification is a prerequisite for making or entering into this Subcontract imposed by Executive Order 12969, August 8, 1995.



- (b) By submission of an offer, the offeror certifies that it has accepted and certifies to all the Terms and Conditions found in the Federal Acquisition Regulation (FAR) at 52.223-13.

**VII. CERTIFICATION REGARDING SUBCONTRACTOR REPRESENTATION BY
FORMER CALTECH/JPL EMPLOYEES**

(The Subcontractor represents and certifies the following as part of its offer.)

By submission of an offer, the offeror certifies that it has no previous JPL or Caltech employee involved in this procurement who has been gone from JPL for less than one year, who participated personally and substantially in the subject matter while working for JPL or Caltech, who was officially responsible for the subject matter while working for JPL or Caltech, and who owns or represents the proposer's organization.



ASBESTOS NOTIFICATION

The Jet Propulsion Laboratory is committed to providing a safe and healthy work environment for all personnel.

In the past several years, the Laboratory management, working through the JPL Safety Operations Section - Industrial Hygiene and Workers Compensation Group (SOS - IHWC) and the Facilities Division, has had an on-going program of asbestos identification and control. This program has included bulk sampling, air monitoring, and training for members of the Facilities and Maintenance staff.

Through this program, some of the buildings at JPL have been identified to contain friable sprayed-on fireproofing above the ceilings. At the Oak Grove site, these buildings include 167, 168, 169, 179, 180, 183, 186, 230, 238, 264 and 291, and at the Foothill site, buildings 502, 506 and 507. Asbestos may be present in other JPL buildings in other various forms, including, but not limited to: transite, thermal system insulation, roofing products, ceiling tiles, spray-applied acoustical ceiling, wall materials, and floor tiles/linoleum/mastic.

The majority of asbestos at JPL is located in restricted access areas, such as mechanical rooms, boiler rooms and attics. It is in generally good condition and does not pose a hazard during normal operations.

The SOS-IHAWC staff has taken numerous air samples in JPL buildings. Sampling results indicate that airborne asbestos levels in the buildings are well below regulatory limits and are lower than those found in industrial workplaces where adverse health effects have been observed. Fiber levels in JPL buildings are not significantly different than fiber levels found outside.

Asbestos-containing materials do not pose a health hazard, unless the fibers become airborne. Subcontractor maintenance/construction/renovation activity involving intentional or accidental contact with friable materials can release fibers; therefore, only authorized and properly trained personnel are permitted to perform work that may disturb asbestos materials.

General written procedures and handling restrictions have been provided to JPL and Subcontractor personnel. SOS-IHAWC must be given notification and, if deemed necessary, a written description of any asbestos-related work to be conducted in areas where asbestos may be present prior to the initiation of activities. The work to be performed will determine if these areas must be tested and cleared. SOS-IHAWC will review sampling results and documentation after completion of Subcontractor activities prior to occupancy.

Pursuant to the California Health and Safety Code (Chapter 10.4, Section 25915), each employee has the right to review all reports about surveys, bulk sampling and air sampling. These reports are available for review during normal business hours. Contact SOS-IHAWC at extension 4-1771 to review these documents or if there are any questions.